GOAL 5: Compliance and Environmental Stewardship

STRATEGIC GOAL: Improve environmental performance through compliance with environmental requirements, preventing pollution, and promoting environmental stewardship. Protect human health and the environment by encouraging innovation and providing incentives for governments, businesses, and the public that promote

BACKGROUND AND CONTEXT

The underlying principles of the activities within Goal 5 are to improve environmental performance through compliance with environmental requirements, preventing pollution, and promoting environmental stewardship. Working in partnership with State and Tribal governments, local communities and other Federal agencies, EPA identifies and addresses significant environmental and public health problems, strategically deploys its resources, and makes use of integrated approaches to achieve strong environmental outcomes.

Enforcement and Compliance

The Agency is committed to implementing a "smart enforcement" approach to EPA's mission of identifying, preventing, and reducing potential environmental risks and noncompliance and promoting greater voluntary environmental stewardship. This approach uses the most appropriate enforcement or compliance tool to address the most significant problems to achieve the best outcomes.

Smart enforcement embodies an integrated, common-sense approach to problem-solving and decision-making. Simply put, smart enforcement is the use of an appropriate mix of data collection and analysis; compliance monitoring, assistance and incentives; civil and criminal enforcement resources; and innovative problem-solving approaches; to address significant environmental issues and achieve environmentally beneficial outcomes. This approach requires that the Agency develop and maintain strong and flexible partnerships with regulated entities and a well-informed public, in order to foster a climate of empowerment, and a shared responsibility for the quality of our nation's land, resources and communities.

Pollution Prevention and Innovation

While enforcement presents one tool for achieving the Agency's mission, the diversity of America's environments (communities, homes, workplaces and ecosystems) requires EPA to adopt a multi-faceted approach to protecting the public from threats that may be posed by pesticides, toxic chemicals and other pollutants. Throughout its history, EPA has taken the lead in developing and evaluating tools and technologies to monitor, prevent, control, and cleanup pollution. The emphasis of the Agency's programs in the 1970's and 1980's was to identify viable options for controlling or remediating environmental problems. Over the last decade, the Agency has turned its attention more and more to pollution prevention (P2) when addressing many important human health and environmental problems. A preventive approach requires that the Agency develop: (1) innovative design and production techniques that minimize or eliminate environmental liabilities; (2) holistic approaches to utilizing air, water, and land resources; and (3) fundamental changes in the creation of goods and services and their delivery to consumers. EPA remains committed to helping industry further prevent pollution by adopting more efficient, sustainable, and protective business practices, materials, and technologies.

The Pollution Prevention Act of 1990 establishes pollution prevention as a "national objective" and the pollution prevention hierarchy as national policy. The Act requires that pollution should be prevented or reduced at the source wherever feasible; that pollution that cannot be prevented should be recycled in an environmentally safe manner; and that, in the absence of feasible prevention or recycling opportunities, pollution should be treated. Disposal or other release into the environment should be used as a last resort. Pollution Prevention is generally more effective than end-of-pipe approaches in reducing potential health and environmental risks in that it helps identify voluntary programs which:

- Reduce releases to the environment;
- Reduce the need to manage pollutants;
- Avoid shifting pollutants from one medium (air, water, land) to another; and
- Protect and conserve energy sources and natural resources for future generations by cutting waste and conserving materials.

Increasingly complex environmental problems, such as the continuing accumulation of greenhouse gases; poor water quality; increasing urban smog; and inequities in building and maintaining water infrastructure; give rise to the need for EPA to develop and use a broader set of cross media tools. Shrinking state and Federal budgets also require the development of new ways to leverage partnerships with states, local communities and businesses to produce better environmental results at lower costs. EPA will work to ensure that governments, businesses and the public meet Federal legal environmental requirements, and will encourage and assist them to adopt environmental stewardship and to voluntarily exceed current requirements. Through public recognition, incentives, and sometimes relief from regulatory mandates, EPA will encourage environmental stewardship, behavior that goes beyond compliance with the laws.

> Strengthening environmental partnerships, targeting priorities, expanding the current collection of tools, and creating a more innovative culture to effectively address challenging problems is what EPA's innovation strategy is all about.

EPA is committed to promoting innovation in strategies to protect the environment, including new less-polluting technologies. In FY 2002, EPA launched a comprehensive Innovations Strategy to drive innovation in all aspects of the Agency's work. Crafted with input from states and other stakeholders, the Strategy focuses on transforming EPA into a more innovative, results-oriented organization by:

- strengthening partnerships with states and Tribes;
- focusing on a set of priority problems that are in need of innovative solutions;
- developing tools and approaches that expand problem-solving capabilities; and,
- fostering an innovation-friendly culture and set of organizational systems.

The effectiveness of EPA's regulatory decisions depends on the analysis underlying these regulations, and the clarity with which they are presented. Their quality determines how well environmental programs actually work, and the extent to which they achieve health and environmental goals. Sound economic and policy analysis builds the foundation for EPA to meet its overarching goals, as well as to wisely use societal resources.

EPA's emphasis on economic and policy analysis supports the Agency's continuing effort to quantify the benefits of its air, land and water regulations, policies and programs. For example, determining the value of ecological systems and the benefits associated with preserving these systems will be critical over the coming years as the Agency strives to focus on healthy communities and ecosystems. Sound economic and policy analysis also supports EPA's stewardship and improved compliance goals by fostering consideration of alternative approaches, such as voluntary programs, innovative compliance tools, and flexible, market-based solutions. Sound economic and policy analysis helps EPA achieve results by documenting and communicating its decisions, thereby avoiding challenges to our analyses that might otherwise impede our ability to implement regulations, policies or programs.

Tribal Capacity

Since adoption of the EPA Indian Policy in 1984, EPA has worked with Tribes on a government-to-government basis that affirms the federal trust responsibility that EPA maintains with federally recognized Tribe and Tribal government. In terms of strengthening partnerships with Tribes, under Federal environmental statutes, the Agency has responsibility for assuring human health and environmental protection in Indian Country. EPA has worked to establish the internal infrastructure and organize its activities in order to meet this responsibility. The creation of EPA's American Indian Environmental Office (AIEO) in 1994 took responsibility for such efforts and was a further step in ensuring environmental protection in Indian Country.

Research

Today's environmental innovations extend beyond scientific and technological advances to include new policies and management tools that respond to changing conditions and needs. Examples

include market-based incentives that provide an economic benefit for environmental improvement; regulatory flexibility that gives companies more discretion related to how specific goals are met; and disclosure of information about environmental performance. As a result of these and other innovations, the nation's environmental protection system continues to evolve, with a focus on increased efficiency and effectiveness, and greater inclusiveness of all elements of society.

MEANS AND STRATEGY

Improving Compliance: A strong enforcement and compliance program identifies and reduces noncompliance problems; assists the regulated community in understanding environmental laws and regulations; responds to complaints from the public; strives to secure a level economic playing field for law-abiding companies; and deters future violations. The Agency carefully targets its enforcement and compliance assurance resources, personnel and activities to address the most significant risks to human health and the environment, and to ensure that certain populations do not bear a disproportionate environmental burden.

In FY 2005 the Agency will identify national priorities, in consultation with states and other regulatory partners, to most effectively and efficiently address significant environmental, public health, or noncompliance problems, and will use the most appropriate tool(s) to achieve the best outcomes culminating with the development and implementation of performance-based strategies for FY2005 - FY 2007 national priorities that take into account environmental justice considerations and a workforce deployment analysis.

The EPA will also promote compliance in core program areas by working within the agency and with our partners to address major problems in media-specific programs with the most appropriate tool(s) to achieve the best outcomes. These efforts will be aided by use of a facility "Watch List" that identifies facilities with chronic noncompliance problems. EPA will use compliance data to identify problems in need of EPA or state attention, to monitor performance of Regional and media-specific program elements, and to improve the effectiveness of the program by incorporating lessons learned into program operations.

The Agency's "smart enforcement" approach uses the most appropriate enforcement or compliance tools to address the most significant

problems to achieve the best outcomes. This approach includes:

- Compliance Assistance and Incentives: The Agency's Enforcement and Compliance Assurance Program uses compliance assistance tools to encourage compliance with regulatory requirements and reduce adverse public health and environmental problems. To achieve compliance, the regulated community must first understand its regulatory obligations, and then learn how to best comply with those obligations. EPA supports the regulated universe by assuring that requirements are clearly understood, and by helping industry identify cost-effective options to comply through the use of pollution prevention and innovative technologies. EPA also enables other assistance providers (e.g., states, universities) to provide compliance information to the regulated community.

- Compliance Monitoring: The Agency reviews and evaluates the activities of the regulated community to determine compliance with applicable laws, regulations, permit conditions and settlement agreements and to determine whether conditions presenting imminent and substantial endangerment exist. The majority of work- years devoted to compliance monitoring are provided by the regions to conduct investigations, on-site inspections and evaluations, and perform monitoring, sampling and emissions testing. Compliance monitoring activities are both environmental media- and sector-based. The traditional media-based inspections and evaluations complement those performed by states and tribes, and are a key part of our strategy for meeting the long-term and annual goals established for the air, water, pesticides, toxic substances, and hazardous waste environmental goals included in the EPA Strategic Plan.

- Enforcement: The Enforcement Program addresses violations of environmental laws, to ensure that violators come into compliance with these laws and regulations. The program achieves the Agency's environmental goals through consistent, fair and focused enforcement of all environmental statutes. The overarching goal of the enforcement program is to protect human health and the environment,

- targeting its actions according to degree of health and environmental risk. Further, it aims to level the economic playing field by ensuring that violators do not realize an economic benefit from non-compliance, and seeks to deter future violations.

- Auditing and Evaluation Tools: Maximum compliance requires the active efforts of the regulated community to police itself. EPA will continue to investigate options for encouraging self-directed audits and disclosures. It will also continue to measure and evaluate the effectiveness of Agency programs in improving compliance rates and provide information and compliance assistance to the regulated community. Further, the Agency will maintain its focus on developing innovative approaches, through better communication, fostering partnerships and cooperation, and the application of new technologies.

- Partnering: State, Tribal and local governments bear much of the responsibility for ensuring compliance, and EPA works in partnership with them and other Federal agencies to promote environmental protection. EPA also develops and maintains productive partnerships with other nations, to ensure and enforce compliance with US environmental standards and regulations.

- NEPA Federal Review: EPA fulfills its uniquely federal responsibilities under the National Environmental Policy Act (NEPA). NEPA requires that federal agencies prepare and submit Environmental Impact Statements (EIS), to identify potential environmental consequences of major proposed activities, and develop plans to mitigate or eliminate negative impacts. The Agency maximizes its use of NEPA review resources by targeting its efforts toward potentially high-impact projects, and by promoting cooperation, innovation, and working towards a more streamlined review process.

- International: EPA will continue to cooperate with states and the international community to enforce and ensure compliance with cross-border environmental regulations, and to help build their capacity to design and implement effective

- environmental regulatory, enforcement and environmental impact assessment programs.

Improving Environmental Performance through Pollution Prevention and Innovation: Preventing pollution through regulatory, voluntary, and partnership actions, that is, educating and changing the behavior of the public, is a sensible and effective approach to sustainable development while protecting our nation's health. Two groups with significant potential to effect environmental change are industry and academia. The Agency has successfully implemented a number of pollution prevention (P2) programs with both of these groups. These programs address the market for products through the purchasing and supply chain, emphasize certain sectors for additional targeted technical assistance, provide support for State and Tribal infrastructure, and work to reduce the number and amount of toxic chemicals in use by finding alternative chemicals and alternative industry processes.

- Environmentally Preferable Purchasing: Because of the enormous span of private and public sector activities which would benefit from a prevention-based approach, EPA's P2 programs necessarily cover a wide variety of informational and capacity building activities. For example, the Agency works to improve the market for environmentally "greener" products though voluntary programs, the Environmentally Preferable Purchasing (EPP) Program, and the Green Suppliers Network. EPP provides guidance and carries out a variety of initiatives and outreach activities for a wide constituency, including federal agencies. Under the EPP Program, EPA will help purchasers identify those products that generate the least pollution, consume fewest non-renewable natural resources, and constitute the least threat to human health and to wildlife. The Green Suppliers Network enables large manufacturers to actively engage all levels of their supply chain in the development of good business approaches to prevent pollution.

- Pollution Prevention State Grants: The development and support of State infrastructure is essential for providing small and medium size businesses, government and schools with the opportunities to change and to test new technologies, processes and alternatives. A vital component of our strategy is the continuation of the Pollution

Prevention State Grant Program. In FY 2005, EPA will provide $7 million to States and Tribes to support their efforts to provide industry with technical assistance, information sharing, and outreach. The grants also support promising, innovative ideas for preventing pollution.

- Technical Assistance: Sector-based technical assistance is another method to accomplish our mission. The Resource Conservation Challenge is a major national effort to find flexible, yet more protective ways to conserve our valuable resources through pollution prevention, waste reduction and energy recovery activities that will improve public health and the environment. EPA is working to address environmental problems in the electronics, buildings, hospitals, paper production, and priority chemicals areas under this comprehensive approach. Similarly, in an effort to expand voluntary pollution prevention strategies to the healthcare sector, the Hospitals for a Healthy Environment (H2E) Program works with hospitals and health care facilities to eliminate mercury use and reduce hospital wastes.

- Green Chemistry: EPA works to help industry further prevent pollution by adopting more efficient, sustainable and protective business practices, materials, and technologies. EPA's Green Chemistry Program supports research and fosters development and implementation of innovative chemical technologies to prevent pollution in a scientifically sound, cost-effective manner. The Green Engineering Program works to incorporate "green" or environmentally conscious thinking and approaches in the daily work of engineers, especially of chemical and environmental engineers. Similarly, EPA's Design for the Environment (DfE) Industry Partnership Program promotes integration of cleaner, cheaper, and smarter pollution prevention solutions into everyday business practices.

- NEPA Federal Review: EPA fulfills its uniquely federal responsibilities under the National Environmental Policy Act (NEPA). NEPA requires that federal agencies prepare and submit Environmental Impact Statements (EIS), to identify potential environmental consequences of major

proposed activities, and develop plans to mitigate or eliminate negative impacts. The Enforcement and Compliance Assistance Program maximizes its use of NEPA review resources by targeting its efforts toward potentially high-impact projects, and by promoting cooperation, innovation, and working towards a more streamlined review process.

- Resource Conservation Challenge (RCC): This program focuses on recovering materials and energy, either by converting wastes into products and energy directly or as a result of process and product redesigns that produce these benefits. We will closely coordinate our RCC efforts with the Agency's other pollution prevention activities, potentially revising our strategies or targets to focus on materials and energy recovery through recycling when source reduction is not a feasible solution. The Agency is also working with its partners to identify additional goals that will reflect our expanded effort, beginning in 2003, to increase recovery of materials and energy and reduce releases of priority chemicals in waste. We expect these new goals to be in place by 2004, as the program becomes fully operational.

- State Innovation Grant Program: EPA will develop and promote innovative environmental protection strategies that achieve better environmental results at a lower cost and also reward environmental stewardship. In collaboration with its state and Tribal partners, the Agency will continue to focus its efforts on innovations that will help small businesses and communities improve both their environmental performance and their bottom lines. A cornerstone of the Agency's Innovation Strategy is reaching out to states and tribes through the State Innovation Grant Program to promote, support and facilitate innovation in state and Tribal environmental programs. The Grant Program allows states and tribes to test innovative ideas, such as using Environmental Management Systems in the permitting system to improve environmental results while achieving resource efficiencies.

- Regulatory and Economic Management and Analysis: EPA is exploring the potential for more integrated, holistic, regulatory and

non-regulatory approaches at a facility level, building on experience with federal and State pilot programs for permitting and pollution prevention. EPA sees facility-wide approaches as holding the possibility of obtaining better environmental results, while eliminating unnecessary regulatory burdens. These approaches should help stimulate pollution prevention, and help facilities obtain the maximum benefit from use of environmental management systems. The Agency will augment programs such as EPA's National Environment Performance Track Program, which recognize and reward superior environmental performance and motivate improvements. Under its Sector Strategies Program, EPA will also tailor environmental performance improvement efforts to particular industry sectors.

- Small Business: EPA has undertaken an effort to review the current Agency Small Business Strategy. The new Strategy will guide the Agency in future efforts to understand the operations and needs of small businesses, consider those needs when developing and implementing programs and policies that affect them, and work effectively with the small business community to improve environmental performance.

Building Tribal Capacity: EPA's strategy for Tribes has three major components. First, work with Tribes to create an environmental presence for each federally recognized Tribe. An environmental presence allows most Tribes to support at least one or two persons working in their community to build a strong, sustainable environment for the future. These people perform vital work by assessing the status of a Tribe's environmental condition and building an environmental program tailored to that Tribe's needs.

Another key role of this workforce is to alert EPA of serious conditions requiring attention in the near term so that, in addition to assisting in the building of Tribal environmental capacity, EPA can work with the Tribe to respond to immediate public health and ecological threats. Second, provide the information needed by the Tribe to meet EPA and Tribal environmental priorities. At the same time, ensure EPA has the ability to view and analyze the conditions on Indian lands and the effects of EPA and

Tribal actions and programs on the environmental conditions. Third, provide the opportunity for implementation of Tribal environmental programs by

Tribes, or directly by EPA, as necessary.

Managing and Improving Environmental Data: Through the Environmental Information Exchange Network (http://www.exchange network.net), EPA will continue to provide funding to states, tribes, and territories to encourage and promote their data integration efforts and participation in the Network.[1] These grants will allow states and tribes to create "next generation" environmental data systems that integrate air, water, and waste data and provide the regulated community with efficient and reliable electronic means for reporting compliance information consistent with the President's Management Agenda and the goals of e-Government.

The National Environmental Information Exchange Network grant program encourages state and other partners' data integration efforts and their participation in the Network. State, Tribal, and EPA data on the Network will both facilitate understanding of various environmental issues and serve as a precursor to understanding the data needed to fully comprehend environmental conditions and trends and, thus, make better-informed environmental and human health decisions.

This program has four main parts: Network Readiness; Implementation; Collaboration; and Support Grants. These grants will increase state and Tribal capacity to integrate their environmental data, reduce reporting burden, enhance electronic reporting, provide public access to data, and participate in the Exchange Network.

Enhancing Science and Research: EPA's Compliance and Environmental Stewardship strategic goal is designed to protect human health and the environment by improving environmental behavior through regulatory and non-regulatory means. Under this goal, EPA strives to use science and research more strategically and effectively to inform Agency policy decisions and guide compliance, pollution prevention, and environmental stewardship efforts. In order to strengthen the scientific evidence and research supporting environmental policies and decisions, EPA works with its partners and stakeholders to identify research needs and set priorities. The Agency continues to conduct research on pollution prevention and new and developing technologies, with an overall aim of promoting conservation of energy and natural resources,

pollution prevention, recycling, and other aspects of environmental stewardship.

EPA also conducts research to enhance its

capacity to evaluate the economic costs and benefits and other social impacts of environmental policies. These efforts, undertaken in concert with other agencies, will result in improved methods to assess economic costs and benefits, such as improved economic assessments of land use policies and improved assessments for the valuation of children's health, as well as other social impacts of environmental decision-making.

The Agency will also continue to characterize, prevent, and clean up contaminants associated with high priority human health and environmental problems through the development and verification of improved environmental tools and technologies. EPA will incorporate a holistic approach to pollution prevention by assessing the interaction of multiple stressors threatening both human and environmental health, and by developing cost-effective responses to those stressors. Research will also explore the principles governing sustainable systems and the integration of social, economic, and environmental objectives in environmental assessment and management. Emphasis will be on developing and assessing preventive approaches for industries and communities having difficulty meeting pollution standards. In a broader context, the pollution prevention research program will continue expanding beyond its traditional focus on the industrial sectors to other sectors (e.g., municipal) and ecosystems. The P2 research program will also focus on developing outcome goals to measure its performance.

Several mechanisms are in place to ensure a high-quality research program at EPA. The EPA's Science Advisory Board (SAB), an independent chartered Federal Advisory Committee Act (FACA) committee, meets annually to conduct an in-depth review and analysis of EPA's Science and Technology account. The SAB provides its findings to the House Science Committee and sends a written report on the finding to EPA's Administrator after every annual review. In addition, EPA's scientific and technical work products undergo either internal or external peer review, with major or significant products requiring external peer review. The Agency's Peer Review Handbook (2nd Edition) codifies procedures and guidance for conducting peer review.

STRATEGIC OBJECTIVES AND FY 2005 ANNUAL PERFORMANCE GOALS

Improve Compliance

By 2008, maximize compliance to protect human health and the environment through compliance assistance, compliance incentives, and enforcement by achieving a 5 percent increase in the pounds of pollution reduced, treated, or eliminated,[1] and achieving a 5 percent increase in the number of regulated entities making improvements in environmental management practices.[2] (Baseline to be determined for 2005.)

Improve Environmental Performance through Pollution Prevention and Innovation.

By 2008, improve environmental protection and enhance natural resource conservation on the part of government, business, and the public through the adoption of pollution prevention and sustainable practices that include the design of products and manufacturing processes that generate less pollution, the reduction of regulatory barriers, and the adoption of results-based, innovative, and multimedia approaches.

Build Tribal Capacity

Through 2008, assist all federally recognized Tribes in assessing the condition of their environment, help in building their capacity to implement environmental programs where needed to improve Tribal health and environments, and implement programs in Indian Country where needed to address environmental issues.

Enhance Science and Research

Through 2008, strengthen the scientific evidence and research supporting environmental

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[1]"Pounds of pollutants reduced, treated, or eliminated" is an EPA measure of the quantity of pollutants that will no longer be released to the environment as a result of a non-complying facility returning to its allowable limits through the successful completion of an enforcement settlement. (Facilities may further reduce pollutants by carrying out voluntary Supplemental Environmental Projects.) On-line compliance information is available to the public via ECHO, at http://www.epa.gov/echo/.

[2]"Environmental management practices" refers to a specific set of activities EPA tracks to evaluate changes brought about through assistance, incentives, and concluded enforcement actions. Implementing or improving environmental management practices—for example, by changing industrial processes; discharges; or testing, auditing, and reporting—may assist a regulated facility in remaining in compliance with environmental requirements. Further information on environmental management practices is available at www.epa.gov/compliance/resources/publications/planning/caseconc.pdf.

policies and decisions on compliance, pollution prevention, and environmental stewardship.

HIGHLIGHTS

Improving Compliance

The Compliance Assistance Program strategically targets areas where regulated entities demonstrate an incomplete understanding of how they can best comply with regulatory requirements. The Agency's support of industry and government sector internet-based Compliance Assistance Centers greatly expands the reach of EPA's compliance assistance efforts. It provides educational tools and other assistance, such as workshops and on-site visits, to help increase understanding of regulatory obligations, improve environmental management practices and reduce pollution.

Other tools that are used include compliance incentives, voluntary programs, and innovative approaches designed to motivate better environmental compliance and performance by individuals, communities, businesses and industry sectors. The Agency promotes self-policing and improvement through incentives, such as EPA's Audit, Small Business and Small Local Governments policies and the inclusion of environmental management systems in enforcement actions.

The Agency will continue to work with states and tribes to target areas that pose risks to human health or the environment, display patterns of noncompliance, or include disproportionately exposed populations. Media-specific, industry sector and problem-based priorities will be established for the national program, and will be developed in conjunction with the Regional offices, with input from states, tribes, environmental justice representatives, and other stakeholders.

The Agency's Forensics Support Program provides technical support, including field sampling and measurement; forensic analytical chemistry; and computer forensic imaging, restoration and analysis. The forensics team consistently provides high-quality data and analyses, allowing the Agency to successfully investigate and prosecute the nation's most complex criminal and civil enforcement cases.

Improving Environmental Performance through Pollution Prevention and Innovation

In the 1990's, through the Pollution Prevention Act, Congress formally established a national policy to prevent or reduce pollution at its source whenever feasible. The Act defines P2 as

"…the use of materials, processes, or practices that reduce the use of hazardous materials, energy, water, or other resources and practices that protect natural resources through conservation or more efficient use." [3]

Major provisions of the Act include:

- Providing matching funds for State and local P2 programs through the PPIS grant program to promote P2 techniques by businesses
- Establishing a P2 strategy outlining the Agency's intent to promote source reduction and collect data on source reduction
- Operating a source reduction clearinghouse
- Mandating P2 reporting as part of TRI

There are also several Executive Orders that address Pollution Prevention. For example, Executive Order 13101, titled Greening the Government through Waste Prevention, Recycling, and Federal Acquisition, strengthens federal mandates to protect the environment and promote economic growth through the purchase of environmentally preferable products.[4] Using the purchasing power of the federal government is one way to help improve the market for environmentally preferable, recycled content, and bio-based products while protecting our natural resources and providing an example for private industry.

The Executive Order (EO) defines "environmentally preferable" as "products or services that have a lesser or reduced effect on human health and the environment when compared with competing products and services that serve the same purpose." The EO also states that products or services should be compared across the entire life cycle – from raw material acquisition to its final disposal at its end of life. EPA has several responsibilities under the EO, including developing guidance on environmentally preferable purchasing for federal agencies, and assisting federal agencies with conducting and documenting pilot projects. EPA has also developed tools to assist federal purchasers, including a database of environmental standards, case study of federal pilot projects, model contract language and other resources.

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[3] Pollution Prevention Act. *U.S. Code* Title 42, The Public Health and Welfare, Chapter 133, sec. 13101 b. Policy.
[4] Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition - 63 *Federal Register* 49643. September 16, 1998.

Reducing pollution at its source involves two types of changes in behavior: making the greener products available, and increasing the demand for them. The Environmentally Preferable Purchasing (EPP) Program works to harness the purchasing power of government to stimulate demand for "greener" products and services, thereby fostering manufacturing changes. In FY 2005, the P2 program will shift resources to state grants and other P2 programs, which have shown significant results. The P2 research program will be evaluated to improve its performance and contribution to the Agency's P2 efforts.

In FY 2005, the Agency also will continue to identify environmental performance standards by which products can be evaluated, and invest in the development of tools, such as life-cycle analysis tools that businesses and purchasers can use to evaluate the environmental performance of products. In FY 2005, the Agency will continue to focus on providing tools, resources and models to federal agencies on a number of product categories, including electronics, janitorial services, and meetings/conferences. EPA will also continue its efforts to meet its own goals to green its own facilities and operations, including purchasing.

The voluntary Green Suppliers Network (GSN) builds on the premise that cost effective manufacturing, pollution prevention and environmental protection can be the result of good business planning and practice. The GSN uses the purchasing power of the private sector to achieve pollution prevention and manufacturing efficiencies throughout the supply chain. In FY 2005 the GSN will continue to develop and enhance partnerships with the aerospace, healthcare/pharmaceutical, office/home furniture, farm and construction, and automotive sectors. The Agency expects to explore GSN with other federal agencies, replication of the program internationally, and working with new sectors, such as the truck/bus and appliance manufacturing sectors.

Through voluntary partnerships with academia, industry, and other government agencies, Green Chemistry supports fundamental research in environmentally benign chemistry and provides a variety of educational and international activities, including sponsoring conferences and meetings and developing tools. The Presidential Green Chemistry Challenge Award Program recognizes superior achievement in the design of chemical products, and continues to quantitatively demonstrate the scientific, economic, and environmental benefits that green

chemistry technologies offer.[5] In FY 2005, the program will explore ways to increase the number and effectiveness of incentives, and to reduce the barriers to mainstreaming green chemistry practices.

Traditionally, engineering approaches to pollution prevention have been focused on waste minimization and have not addressed such risk factors as exposure, fate, and toxicity. EPA's Green Engineering Program promotes consideration of these factors in the design, commercialization, and use of chemical products and the development of feasible, economical processes that minimize generation of pollution at the source. In FY 2005, the program will focus on the implementation of specific activities that provide quantifiable environmental benefits, particularly in industrial applications. The program will continue to partner with research institutions on their green engineering/sustainable research projects and collect data on the application of Green Engineering approaches and tools, with an emphasis on gathering information from people and organizations that have already received green engineering training and have adopted green engineering approaches.

The Design for the Environment Program will continue to work with industry sectors to reduce risks to human health and the environment, improve performance, and save costs associated with existing and alternative pollution prevention technologies or processes. In FY 2005, the program expects to initiate one to three new projects. The program will also implement, as part of any new partnership building activities, evaluation guidelines for developing and collecting measures, building on program-wide analysis and evaluation that will be completed in FY 2004.

Pollution Prevention State Grants provide funds to build pollution prevention strategies into State government environmental protection programs, encourage innovative and non-regulatory pollution prevention solutions and encourage government/industry partnerships. Pollution Prevention State Grants are unique within EPA because they address cross-media and multi-media environmental impacts at the source, rather than end-of-pipe.

The Agency's innovation programs are demonstrating significant results. For example, in

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[5] U.S. EPA, Office of Pollution Prevention and Toxics, *Green Chemistry Challenge*. Accessed October 1, 2003. Available at http://www.epa.gov/greenchemistry/index.html.

FY 2003, The Performance Track Program added 61 new members, bringing the total number of members to 320. The Program's first progress report showed that in FY 2001 Performance Track facilities reduced energy use by 1.1 million MMBTUs, reduced hazardous materials use by 908 tons, and increased their use of recycled and reused materials by 10,823 tons. (www.epa.gov/sectors/)

EPA expanded its partnerships with industry sectors in FY 2003. Eight new sectors (agribusiness, cement manufacturing, colleges and universities, construction, forest products, iron and steel manufacturing, paint and coatings, and ports) committed to work collaboratively to improve environmental management while also addressing regulatory and other barriers to improve performance and increase efficiencies. (www.epa.gov/sectors/)

Past performance demonstrates remarkable progress in delivering results. For example, in FY 2003, EPA assisted more than ten states in continuing support of twenty-one innovative projects approved in previous years and in approving eight new innovative projects. These projects achieved a broad range of efficiency gains by: enhancing the infrastructure to recycle electronic waste, streamlining permitting, better coordinating non-point and point sources to meet Total Maximum Daily Loads, supporting streamlined state authorization procedures, and improving compliance monitoring for small drinking water systems. These projects' also invested in less energy demanding alternative technology at pulp and paper facilities, alternative landfill technology to increase landfill capacity, and increased recycling of hazardous wastes.

During the same year, EPA also awarded grants to three states to test innovative concepts in permitting. First, the funding provided under the State Innovation Grant Program allowed the State of Arizona to develop a web-based, Aintelligent@ screening and permit application program for storm water permits that will increase the efficiency of the permitting process. Second, Delaware will develop an auto body sector Environmental Results Program (ERP) modeled after other state ERP projects, such as Rhode Island and Florida. The Delaware ERP project expects to significantly improve environmental compliance in hundreds of small businesses state-wide. Third, Massachusetts will develop a watershed-based permitting program to improve water quality on a National Heritage Waterway.

The Environmental Results Program model that originated in Massachusetts has expanded to seven other states and the District of Columbia with projects being implemented across seven business sectors: dry cleaners, printers, photoprocessors, auto repair facilities, auto salvage yards, auto body shops, gasoline stations (underground storage tanks and Stage II vapor recovery systems).

Research

In FY 2005, the Agency will continue its systems-based approach to pollution prevention, which will lead to a more thorough assessment of human health and environmental risks and a more comprehensive management of those risks. EPA will improve FY 2005 performance measures to prevent pollution at its source and continue to evaluate a small set of environmental technologies through the Environmental Technology Verification (ETV) program. ETV is a voluntary, market-based verification program for commercial-ready technologies. In FY 2005, the ETV program will complete 15 additional verifications and two testing protocols. In addition, the program will evaluate whether verifications and testing protocols have led to increased use of environmental technologies.

Additionally, through the National Environmental Technology Competition (NETC), based on results from field demonstrations of one-year in duration, EPA will recognize innovative technologies that cost-effectively remove arsenic from drinking water to help small communities meet the new arsenic drinking water standard. Other work includes research on market mechanisms and incentives that will support investigations that explore the conditions under which financial and other performance incentives will achieve environmental objectives at a lower cost or more effectively than traditional regulatory approaches.

EXTERNAL FACTORS

The Agency's Enforcement and Compliance Assurance Program's ability to meet its annual performance goals may be affected by a number of factors. Projected performance could be impacted by natural catastrophes, such as major floods or significant chemical spills, requiring a redirection of resources to address immediate environmental threats. Many of the targets are coordinated with and predicated on the assumption that state and Tribal partners will continue or increase their levels of enforcement and compliance work. In addition, successful conclusion of EPA's enforcement relies on the Department of Justice to accept and prosecute

cases. The success of EPA's activities hinges on the availability and applicability of technology and adequate resources to modernize and maintain our information systems. Finally, the regulated community's willingness to comply with the law will greatly influence EPA's ability to meet its performance goals.

Other factors, such as the number of projects subject to scoping requirements initiated by other federal agencies, the number of draft/final documents (Environmental Assessments and Environmental Impact Statements) submitted to EPA for review, streamlining requirements of the Transportation Equity Act for the 21st Century (TEA-21), and the responsiveness of other federal agencies to environmental concerns raised by EPA, may also impact the Agency's ability to meet its performance goals. The NEPA Compliance workload is driven by the number of project proposals submitted to EPA for funding or NPDES permits that require NEPA compliance, including the Congressional projects for wastewater, water supply and solid waste collection facility grants which have increased in recent years.

In the area of pollution prevention, the Agency's work is almost entirely dependent on voluntary partnerships, collaboration, and persuasion, since there are few environmental regulations that set specific source-reduction requirements. The Design for the Environment Program seeks partnerships with industry trade associations to engage jointly in the development and marketing of products that generate less pollution. The Green Chemistry Program challenges industry and the academic community to step forward with new chemical formulations that pose fewer risks to human health and the environment. EPA's strategy of "greening the supply chain" depends on the willingness of large manufacturers to voluntarily require their suppliers to provide environmentally preferable products. These efforts all depend on our partners' continued willingness to cooperate in joint endeavors that may not realize an immediate payoff. EPA's ability to carry out its voluntary pollution prevention initiatives could be reduced if partners begin to believe that the initiatives are not worthwhile, are too risky, or are otherwise contrary to their best interests. Historically however, this has not been the case, and the Agency and industry have worked well together to reduce pollution.

Finally, our evolving user community will also affect the success of our information efforts. As more states and Tribes develop the ability to integrate their environmental information, we must adjust EPA's systems to ensure that we are able to receive and process reports from states and industry under Agency statutory requirements. Local citizens' organizations and the public at large are also increasingly involved in environmental decision-making, and their need for information and more sophisticated analytical tools is growing. Further, shrinking state budgets have underscored the critical need for the State Innovations Grants Program.

EPA's policy has been, and continues to be, that Tribes develop the capability to implement federal programs themselves. However, in working with Tribes, EPA has realized that "Treatment as a State" (TAS) may not suit the needs of all Tribes. Some Tribes with acute pollution sources and other environmental problems may be too small to support fully delegated or approved environmental programs. Other Tribes are wary of seeking TAS status because it may lead to costly litigation that may in turn lead to a diminishment of Tribal sovereignty. In the absence of EPA-approved Tribal programs, EPA generally faces practical challenges in implementing the federal programs in Indian Country. EPA will continue to encourage and work with Tribes to develop their capability to implement Federal environmental programs.

Achieving our objectives for Indian Country is based upon a partnership with Indian Tribal governments, many of which face severe poverty, employment, housing and education issues. Because Tribal Leader and Environmental Director support will be critical in achieving this objective, the Agency is working with Tribes to ensure that they understand the importance of having good information on environmental conditions in Indian Country and sound environmental capabilities. In addition, EPA also works with other Federal Agencies, the Department of Interior (US Geological Survey, Bureau of Indian Affairs, and Bureau of Reclamation), the National Oceanic and Atmospheric Administration, the Indian Health Service and the Corps of Engineers to help build programs on Tribal lands. Changing priorities in these agencies could impact their ability to work with EPA in establishing and implementing strategies, regulations, guidance, programs and projects that affect Tribes.

Strong science is predicated on the desire of the Agency to make human health and environmental decisions based on high-quality scientific data and information. This challenges the Agency to perform and apply the best available science and technical analyses when addressing health and environmental problems that adversely impact the United States. Such a challenge moves the Agency to a more integrated, efficient, and effective approach of

reducing risks. As long as high quality science is a central tenant for actions taken by the Agency, then external factors will have a minimal impact on the goal.

Resource Summary
(Dollars in thousands)

	FY 2003	FY 2004	FY 2005	FY 2005 Req. v.
	Actuals	Pres. Bud.	Pres. Bud.	FY 2004 Pres Bud
Compliance and Environmental Stewardship	**$662,042.0**	**$712,907.9**	**$750,556.9**	**$37,649.0**
Improve Compliance	$395,964.4	$418,998.2	$431,695.1	$12,696.9
Improve Environmental Performance through Pollution Prevention and Innovation	$123,311.5	$137,968.5	$169,802.0	$31,833.5
Build Tribal Capacity	$70,556.6	$78,759.3	$78,931.1	$171.7
Enhance Science and Research	$72,209.6	$77,181.8	$70,128.7	($7,053.1)
Total Workyears	3,492.9	3,489.3	3,547.4	58.1

OBJECTIVE: Improve Compliance

By 2008, maximize compliance to protect human health and the environment through compliance assistance, compliance incentives, and enforcement by achieving a 5 percent increase in the pounds of pollution reduced, treated, or eliminated, and achieving a 5 percent increase in the number of regulated entities making improvements in environmental management practices. (Baseline to be determined for 2005.)

Resource Summary
(Dollars in Thousands)

	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	FY 2005 Req. v. FY 2004 Pres Bud
Improve Compliance	**$395,964.4**	**$418,998.2**	**$431,695.1**	**$12,696.9**
Building & Facilities	$3,312.5	$5,158.7	$4,149.5	($1,009.2)
Environmental Program & Management	$346291.1	$371,655.6	$383,218.7	$11,563.1
Hazardous Substance Superfund	$16,436.1	$13,056.6	$15,116.8	$2,060.2
Inspector General	$1,475.2	$1,827.3	$1,910.1	$82.8
Science & Technology	$268.0	$0.0	$0.0	$0.0
State and Tribal Assistance Grants	$28,181.5	$27,300.0	$27,300.0	$0.0
Total Workyears	2,555.4	2,529.4	2,587.4	58.0

Program Project
(Dollars in Thousands)

	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	FY 2005 Req. v. FY 2004 Pres Bud
Categorical Grant: Pesticides Enforcement	$20,341.8	$19,900.0	$19,900.0	$0.0
Categorical Grant: Toxics Substances Compliance	$5,229.8	$5,150.0	$5,150.0	$0.0
Categorical Grant: Sector Program	$2,609.9	$2,250.0	$2,250.0	$0.0
Compliance Monitoring	$56,567.5	$58,155.0	$62,216.7	$4,061.7
Criminal Enforcement	$40,448.5	$38,076.8	$39,990.7	$1,828.9
Enforcement Training	$4,661.5	$4,038.6	$4,058.1	$19.5
Compliance Incentives	$9,589.0	$9,257.2	$9,370.7	$113.5
Compliance Assistance and Centers	$25,054.3	$27,205.8	$27,759.1	$553.3
Civil Enforcement	$100,366.7	$108,318.4	$113,030.5	$4,712.1
International Capacity Building	$1,460.7	$1,051.5	$862.4	($189.1)
Homeland Security: Critical Infrastructure Protection	$4,181.1	$3,901.9	$3,972.4	$70.5
Administrative Projects	$125,453.6	$141,693.0	$143,219.5	$1,526.5
TOTAL	**$395,964.4**	**$418,998.2**	**$431,695.1**	**$12,696.9**

ANNUAL PERFORMANCE GOALS AND MEASURES

Non-Compliance Reduction

In 2005   Through monitoring and enforcement actions, EPA will increase complying actions, pollutant reduction or treatment, and improve EMP.

In 2004   EPA will direct enforcement actions to maximize compliance and address environmental and human health problems.

In 2003   EPA will directed enforcement actions to maximize compliance and address environmental and human health problems.

Performance Measures:	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	
Millions of pounds of pollutants required to be reduced through enforcement actions settled this fiscal year.(core optional)	600	350		M pounds
Number of EPA inspections conducted (core required)	18,880	15,500		inspections
Pounds of pollution estimated to be reduced, treated, and eliminated as a result of concluded enforcement actions.			300	million pounds
Percentage of concluded enforcement cases (including SEPs) requiring that pollutants be reduced, treated, or eliminated and protection of populations or ecosystems.			30	Percentage
Percentage of concluded enforcement cases (including SEPs) requiring implementation of improved env. management practices.			60	percentage
Number of inspections, civil investigations and criminal investigations conducted.			18,500	insp&inv.
Dollars invested in improved env. performance or improved EMP as a result of concluded enforcement actions (i.e., injunctive relief and SEPs)			4 billion	Dollars
Percentage of regulated entities taking complying actions, as a result of compliance monitoring.			10	percentage
Percent of concluded enforcement actions that require an action that results in environmental benefits and/or changes in facility management or information practices.	63	75		Percent
Number of Criminal Investigations	471	400		Investigations
Number of Civil Investigations	344	225		Investigations

Baseline: Protecting the public and the environment from risks posed by violations of environmental requirements is basic to EPA's mission. To develop a more complete picture of the results of the enforcement and compliance program, EPA has initiated a number of performance measures designed to capture the results of reducing the amount of time for significant noncompliers to return to compliance, reducing noncompliance recidivism rates, and improvements in facility process and/or management practices through behavioral changes. The baseline rates for many of these measures were established in FY00. These measures will complement the traditional enforcement measures of inspections and enforcement actions to provide a more complete picture of environmental results from the enforcement and compliance program.

Compliance Incentives

In 2005   Through self-disclosure policies, EPA will increase the percentage of facilities reducing pollutants or improving EMP.

In 2004   Increase opportunities through new targeted sector initiatives for industries to voluntarily self-disclose and correct violations on a corporate-wide basis.

In 2003   Increased opportunities through new targeted sector initiatives for industries to voluntarily self-disclose and correct violations on a corporate-wide basis.

Performance Measures:	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	
Percentage of audits or other actions that result in the reduction, treatment, or elimination of pollutants; and the protection of populations or ecosystems.			5	percentage
Percentage of audits or other actions that result in improvements in env. management practices.			10	Percentage
Pounds of pollutants reduced, treated, or eliminated, as a result of audit agreements or other actions.			.25 million	Pounds
Dollars invested in improving environmental management practices as a result of audit agreements or other actions.			2 million	dollars
Facilities voluntarily self-disclose and correct violations with reduced or no penalty as a result of EPA self-disclosure policies.	848	500		Facilities

Baseline: EPA developed its Audit/Self-Policing Policy in 1995 to encourage corporate audits and subsequent correction of self-discovered violations. That Policy as well as the Small Business Compliance Policy were modified in FY00. The Agency is working to expand the use of the Audit Policy through aggressive outreach to specific sectors. In FY01 the performance measure was modified to reach settlements with 500 facilities to voluntarily self-disclose and correct violations. This same measure has been carried continued.

Regulated Communities

In 2005   Through compliance assistance, EPA will increase the understanding of regulated entities, improve Environmental Management Practices, and reduce pollutants.

In 2004   Increase the regulated community's compliance with environmental requirements through their expanded use of compliance assistance. The Agency will continue to support small business compliance assistance centers and develop compliance assistance tools such as sector notebooks and compliance guides.

In 2003   Increased the regulated community's compliance with environmental requirements through their expanded use of compliance assistance. The Agency continued to support small business compliance assistance centers and developed compliance assistance tools such as sector notebooks and compliance guides.

Performance Measures:	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	
Number of facilities, states, technical assistance providers or other entities reached through targeted compliance assistance (core optional)	721,000	500,000		Entities
Percentage of regulated entities seeking assistance from EPA-sponsored CA centers and clearinghouse reporting that they improved EMP as a result of their use of the centers or the clearinghouse.			60	percentage
Percentage of regulated entities receiving direct compliance assistance from EPA (e.g., training, on-site visits) reporting that they improved EMP as a result of EPA assistance.			50	Percentage
% of regulated entities seeking assistance from EPA-sponsored CA centers and clearinghouse reporting that they reduced, treated, or eliminated pollution as a result of that resource.			25	Percentage
% of regulated entities seeking assistance from EPA-sponsored CA centers and clearinghouse reporting that they increased their understanding of env. rqmts. as a result of their use of the resources.			75	Percentage
% of regulated entities receiving direct CA from EPA (e.g., training, on-site visits) reporting that they increased their understanding of env. rqmts. as a result of EPA assistance.			65	percentage
% of regulated entities receiving direct assistance from EPA (e.g., training, on-site visits) reporting that they reduced, treated, or eliminated pollution, as a result of EPA assistance.			25	percentage

Baseline: EPA provides clear and consistent descriptions of regulatory requirements to assure that the community can understand its obligations. EPA supports initiatives targeted toward compliance in specific industrial and commercial sectors or with certain

regulatory requirements. Compliance assistance tools range from plain-language guides, fact sheets, checklists and newsletters. New distribution methods include the on-line Clearinghouse. In FY03, EPA is planning to reach 475,000 facilities, states, or technical assistance providers through targeted compliance assistance efforts.

VERIFICATION AND VALIDATION OF PERFORMANCE MEASURES

FY 2005 PERFORMANCE MEASURE:

Percentage of concluded enforcement cases (including SEPs) requiring that pollutants be reduced, treated, or eliminated and protection of populations or ecosystems.

Pounds of pollution estimated to be reduced, treated, or eliminated as a result of concluded enforcement actions.

Percentage of concluded enforcement cases (including SEPs) requiring implementation of improved environmental management practices.

Dollars invested in improved environmental performance or improved environmental management practices as a result of concluded enforcement actions (i.e., injunctive relief and SEPs).

Percentage of audits or other actions that result in the reduction, treatment, or elimination of pollutants and protection of populations or ecosystems.

Percentage of audits or other actions that result in improvements in environmental management practices.

Pounds of pollutants reduced, treated, or eliminated as a result of audit agreements or other actions.

Dollars invested in improved environmental management practices as a result of audit agreements or other actions.

Performance Database: The Integrated Compliance Information System, (ICIS), which tracks EPA civil enforcement (e.g., judicial and administrative) actions.

Data Source: Most of the essential data on environmental results in ICIS are collected through the use of the Case Conclusion Data Sheet (CCDS), which Agency staff begins preparing after the conclusion of each civil (judicial and administrative) enforcement action. EPA implemented the CCDS in 1996 to capture relevant information on the results and environmental benefits of concluded enforcement cases. The information generated through the CCDS is used to track progress for several of the performance measures. The CCDS form consists of 27 specific questions which, when completed, describe specifics of the case; the facility involved; information on how the case was concluded; the compliance actions required to be taken by the defendant(s); the costs involved; information on any Supplemental Environmental Project to be undertaken as part of the settlement; the amounts and types of any penalties assessed; and any costs recovered through the action, if applicable. The CCDS documents whether the facility/defendant, through injunctive relief, must: (1) reduce pollutants; and (2) improve management practices to curtail, eliminate or better monitor and handle pollutants in the future. The Criminal Enforcement Program also maintains a separate case conclusion data form and system for compiling and analyzing the results of criminal enforcement prosecution.

Methods, Assumptions and Suitability: For enforcement actions which result in pollution reductions, the staff estimate the amounts of pollution reduced for an immediately implemented improvement, or an average year once a long-term solution is in place. There are established procedures for the staff to calculate, by statute, (e.g., Clean Water Act), the pollutant reductions or eliminations. The procedure first entails the determination of the difference between the current "out of compliance" concentration of the pollutant(s) and the post enforcement action "in compliance" concentration. This difference is then converted to mass per time using the flow or quantity information derived during the case.

QA/QC Procedures: Quality Assurance/Quality Control procedures [See references] are in place for both the CCDS and ICIS entry. There are a Case Conclusion Data Sheet Training Booklet [See references] and a Case Conclusion Data Sheet Quick Guide [See references], both of which have been distributed throughout Regional and

Headquarters' (HQ) offices. Separate CCDS Calculation and Completion Checklists [See references] are required to be filled out at the time the CCDS is completed.

Quality Management Plans (QMPs) are prepared for each Office within The Office of Enforcement and Compliance Assurance (OECA). The Office of Compliance (OC) has established extensive processes for ensuring timely input, review and certification of ICIS information in FY'03. OC's QMP, effective for 5 years, was approved July 29, 2003. OECA instituted a requirement for semiannual executive certification of the overall accuracy of information to satisfy the GPRA, the Agency's information quality guidelines, and other significant enforcement and compliance policies on performance measurement.

Data Quality Review: Information contained in the CCDS and ICIS are required by policy to be reviewed by regional and headquarters' staff for completeness and accuracy.

Data Limitations: The pollutant reductions or eliminations reported on the CCDS are estimates of what will be achieved if the defendant carries out the requirements of the settlement. Information on expected outcomes of state enforcement is not available. The estimates are based on information available at the time a case is settled or an order is issued. In some instances, this information will be developed and entered after the settlement, during continued discussions over specific plans for compliance. Because of the time it takes to agree on the compliance actions, there may be delay in completing the CCDS. Additionally, because of unknowns at the time of settlement, different levels of technical proficiency, or the nature of a case, OECA's expectation is that based on information on the CCDS, the overall amounts of pollutant reductions/eliminations will be prudently underestimated.

Error Estimate: Not available

New & Improved Data or Systems: In November 2000, EPA completed a comprehensive guidance package on the preparation of the Case Conclusion Data Sheet. This guidance, issued to headquarters' and regional managers and staff, was made available in print and CD-ROM, and was supplemented in FY 2002 [See references]. The guidance contains work examples to ensure better calculation of the amounts of pollutants reduced or eliminated through concluded enforcement actions. EPA trained each of its ten regional offices during FY 2002. OC's Quality Management Plan was approved by OEI July 29, 2003, and is effective for five years. [See references]

References: Quality Assurance and Quality Control procedures: Data Quality: Life Cycle Management Guidance, (IRM Policy Manual 2100, dated September 28, 1994, reference Chapter 17 for Life Cycle Management). Case Conclusion Data Sheets: Case Conclusion Data Sheet, Training Booklet, issued November 2000 available: www.epa.gov/compliance/resources/publications/planning/caseconc.pdf; Quick Guide for Case Conclusion Data Sheet, issued November 2000. Information Quality Strategy and OC's Quality Management Plans: Final Enforcement and Compliance Data Quality Strategy, and Description of FY 2002 Data Quality Strategy Implementation Plan Projects, signed March 25, 2002. ICIS: U.S. EPA, Office of Enforcement and Compliance Assurance, ICIS Phase I, implemented June 2002. Internal EPA database; non-enforcement sensitive data available to the public through the Freedom of Information Act (FOIA).

FY 2005 Performance Measure: Number of inspections, civil investigations, and criminal investigations conducted

Performance Databases: Output measure. Integrated Data for Enforcement Analysis (IDEA) integrates data from major enforcement and compliance systems, such as the Permit Compliance System (PCS), Air Facilities Subsystem (AFS), Resource Conservation and Recovery Act Information System (RCRAInfo), and Emergency Response Notification system (ERNS). The Criminal Docket System (CRIMDOC) is a criminal case management, tracking and reporting system. Information about criminal cases investigated by the U.S. EPA-Criminal Investigation Division (CID) is entered into CRIMDOC at case initiation, and investigation and prosecution information is tracked until case conclusion.

Data Source: EPA's regional and Headquarters' offices. U.S. EPA-CID offices.

Methods, Assumptions and Suitability: N/A

QA/QC Procedures: All the systems have been developed in accordance with the Office of Information Management's Lifecycle Management Guidance, which includes data validation processes, internal screen audit checks and verification, system and user documents, data quality audit reports, third-party testing reports, and detailed report specifications for showing how data are calculated. For CRIMDOC, the system administrator performs regularly scheduled quality assurance/quality control checks of the CRIMDOC database to validate data and to evaluate and recommend enhancements to the system.

Data Quality Review: EPA is now using updated monitoring strategies [See references] which clarify reporting definitions and enhances oversight of state and local compliance monitoring programs.   In FY2003, OECA instituted a requirement for semiannual executive certification of the overall accuracy of information to satisfy the GPRA, the Agency's information quality guidelines, and other significant enforcement and compliance policies on performance measurement.

Data Limitations: For all systems, there are concerns about quality and completeness of data and the ability of existing systems to meet data needs. Incompatible database structures/designs and differences in data definitions impede integrated analyses. Additionally, there are incomplete data available on the universe of regulated facilities because not all are inspected/permitted. In addition, the targets for numbers of inspections, and civil and criminal investigations are based on the resources redirected to the state and Tribal enforcement grant program.

Error Estimate: N/A

New & Improved Data or Systems: PCS modernization is underway and the first version is scheduled to be released in December 2005. An Interim Data Exchange Format (IDEF) has been established and will support the transfer of data from modernized state systems into the current PCS data system while PCS is being modernized. EPA is addressing the quality of the data in the major systems and each Office within OECA has developed a Quality Management Plan (data quality objectives, quality assurance project plans, baseline assessments). A new Integrated Compliance Information System (ICIS) supports core program needs and consolidates and streamlines existing systems. Additionally, OECA began implementing its Data Quality Strategy in FY 2002. A new case management, tracking and reporting system (Case Reporting System) is currently being developed that will replace CRIMDOC. This new system will be a more user-friendly database with greater tracking, management and reporting capabilities.

References: Clean Air Act Compliance Monitoring Strategy, April 25, 2001, www.epa.gov/compliance/resources/policies/monitoring/cmspolicy.pdf
AFS: http://www.epa.gov/compliance/planning/data/air/afssystem.html.
PCS: http://www.epa.gov/compliance/planning/data/water/pcssys.html.
RCRA info: http://www.epa.gov/epaoswer/hazwaste/data/index.htm.
For CRIMDOC**:** CRIM-DOC U.S. EPA, Office of Enforcement and Compliance Assurance. Internal enforcement confidential database; non-enforcement sensitive data available to the public through the Freedom of Information Act (FOIA).
Information Quality Strategy and OC's Quality Management Plans: Final Enforcement and Compliance Data Quality Strategy, and Description of FY 2002 Data Quality Strategy Implementation Plan Projects, signed March 25, 2002

FY 2005 Performance Measure: Percentage of regulated entities taking complying actions as a result of compliance inspections and evaluations.

Performance Databases: ICIS and manual reporting by regions

Data Sources: EPA regional offices and Office of Regulatory Enforcement (specifically, the Clean Air Act (CAA)-Mobile Source program).

Methods, Assumptions and Suitability: A new measurement tool, the Inspection Conclusion Data Sheet, (ICDS) will be used to analyze results from inspections conducted under some of EPA's major statutes.   EPA will analyze data on communication of problems to industry, compliance assistance delivered by inspectors, and immediate corrections made by industry according to region, nationally and by industry sector. The inspectors fill out the

Inspection Conclusion Data Sheet (ICDS) for each inspection and that information is reported to ICIS by the Regions.

QA/QC Procedures: ICIS has been developed per Office of Information Management **Lifecycle** Management Guidance, which includes data validation processes, internal screen audit checks and verification, system and user documents, data quality audit reports, third party testing reports, and detailed report specifications for showing how data are calculated.

Data Quality Review: Regional manual reports are reviewed and checked against the inspection data entered into other Agency databases (Air Facilities Subsystem (AFS), Permit Compliance System (PCS), Online Tracking Information System (OTIS), Integrated Data for Enforcement Analysis (IDEA)). Information contained in the CCDS and ICIS are required by policy to be reviewed by regional and headquarters' staff for completeness and accuracy. In FY2003, OECA instituted a requirement for semiannual executive certification of the overall accuracy of information to satisfy the GPRA, the Agency's information quality guidelines, and other significant enforcement and compliance policies on performance measurement.

Data Limitations: ICIS is not currently the primary database for inspections and as a result the regions have to enter inspection data into both ICIS and other Agency databases. This can result in redundant, incomplete, or contradictory data.

Error Estimate: N/A

New & Improved Data or Systems: The new Integrated Compliance Information System (ICIS) will support core program needs and consolidate and streamline existing systems. As ICIS becomes more widely used by the regions and HQ programs some of the problems with data entry and reporting should be resolved. As various older systems become modernized (e.g., PCS), they will incorporate the ICDS data set as part of the system. This should minimize data entry and reporting problems.

References: ICIS: U.S. EPA, Office of Enforcement and Compliance Assurance, ICIS Phase I, implemented June 2002. Internal EPA database; non-enforcement sensitive data available to the public through the Freedom of Information Act (FOIA).

FY 2005 Performance Measure:

Percentage of regulated survey respondents seeking assistance from EPA-sponsored compliance assistance centers and clearinghouse reporting that they improved environmental management practices as a result of their use of the centers or the clearinghouse.

Percentage of regulated survey respondents seeking assistance from EPA-sponsored compliance assistance centers and clearinghouse reporting that they reduced, treated, or eliminated pollution as a result of their use of the centers or the clearinghouse.

Percentage of regulated survey respondents seeking assistance from EPA-sponsored compliance assistance centers and clearinghouse reporting that they increased their understanding of environmental requirements as a result of their use of the centers or the clearinghouse.

Performance Database: In FY2005, EPA Headquarters will manage data on the performance of the Centers and Clearinghouse respondents using ICIS (Integrated Compliance Information System) and will no longer operate and maintain the Reporting Compliance Assistance Tracking System (RCATS).

Data source: Headquarters and EPA's Regional offices will enter information in ICIS upon completion and delivery of media and sector-specific compliance assistance including workshops, training, on-site visits and distribution of compliance assistance tools. ICIS is designed to capture outcome measurement information such as increased awareness/understanding of environmental laws, changes in behavior and environmental improvements as a result of the compliance assistance provided.

Methods, Assumptions and Suitability: N/A

QA/QC Procedures: Automated data checks and data entry guidelines are in place for ICIS.

Data Quality Reviews: Information contained in the ICIS is reviewed by Regional and Headquarters staff for completeness and accuracy.   In FY2003, OECA instituted a requirement for semiannual executive certification of the overall accuracy of information to satisfy the GPRA, the Agency's information quality guidelines, and other significant enforcement and compliance policies on performance measurement.

Data Limitations: None

Error Estimate: None

New/Improved Data or Systems: EPA plans to incorporate RCATS into ICIS in FY2004.

References: Reporting Compliance Assistance Data in the Integrated Compliance Information System (ICIS), January 9, 2004. RCATS: U.S. EPA Office of Enforcement and Compliance Assurance. Internal EPA database. Guidance: RCATs User Guide of March 19, 2001.

FY 2005 Performance Measure:

Percentage of regulated entities receiving direct compliance assistance from EPA (e.g., training, on-site visits) reporting that they improved environmental management practices as a result of EPA assistance.

Percentage of regulated entities receiving direct compliance assistance from EPA (e.g., training, on-site visits) reporting that they increased their understanding of environmental requirements as a result of EPA assistance.

Percentage of regulated entities receiving direct assistance from EPA (e.g., training, on-site visits) reporting that they reduced, treated, or eliminated pollution, as a result of EPA assistance.

Performance Database: EPA Headquarters will manage data on the performance of the Centers and clearinghouse respondents using ICIS (Integrated Compliance Information System) in FY05 and will no longer operate and maintain the Reporting Compliance Assistance Tracking System (RCATS).

Data source: Headquarters and EPA's Regional offices will enter information in ICIS upon completion and delivery of media and sector-specific compliance assistance including workshops, training, on-site visits and distribution of compliance assistance tools. ICIS is designed to capture outcome measurement information such as increased awareness/understanding of environmental laws, changes in behavior and environmental improvements as a result of the compliance assistance provided.

Methods, Assumptions and Suitability: N/A

QA/QC: Automated data checks and data entry guidelines are in place for ICIS.

Data Quality Review: Information contained in the ICIS is reviewed by Regional and Headquarters staff for completeness and accuracy. In FY2003, OECA instituted a requirement for semiannual executive certification of the overall accuracy of information to satisfy the GPRA, the Agency's information quality guidelines, and other significant enforcement and compliance policies on performance measurement.

Data Limitations: None

Error Estimate: None

New & Improved Data or Systems: EPA plans to incorporate RCATS into ICIS in FY2004.

References: Reporting Compliance Assistance Data in the Integrated Compliance Information System (ICIS), January 9, 2004. RCATS: U.S. EPA Office of Enforcement and Compliance Assurance. Internal EPA database. Guidance: RCATs User Guide of March 19, 2001.

STATUTORY AUTHORITIES

Resource Conservation and Recovery Act sections 3007, 3008, 3013, and 7003 (42 U.S.C. 6927, 6928, 6934, 6973)

Comprehensive Environmental Response, Compensation, and Liability Act sections 106, 107, 109, and 122 (42 U.S.C. 9606, 9607, 9609, 9622)

Clean Water Act (CWA) sections 308, 309, and 311 (33 U.S.C. 1318, 1319, 1321)

Safe Drinking Water Act sections 1413, 1414, 1417, 1422, 1423, 1425, 1431, 1432, 1445 (42 U.S.C. 300g-2, 300g-3, 300g-6, 300h-1, 300h-2, 300h-4, 300i, 300i-1, 300j-4)

Clean Air Act sections 113, 114, and 303 (42 U.S.C. 7413, 7414, 7603)

Toxic Substances Control Act (TSCA) sections 11, 16, and 17 and TSCA Titles II and IV (15 U.S.C. 2610, 2615, 2616, 2641-2656, 2681-2692)

Emergency Planning and Community Right-to-Know Act sections 325 and 326 (42 U.S.C. 11045, 11046)

Residential Lead-Based Paint Hazard Reduction Act of 1992, section 1018 under TSCA section 11 (42 U.S.C. 4852d, 2610)

Federal Insecticide, Fungicide, and Rodenticide Act sections 8, 9, 12, 13, and 14 (7 U.S.C. 136f, 136g, 136j, 136k, 136l)

Ocean Dumping Act sections 101, 104B, 105, and 107 (33 U.S.C. 1411, 1414B, 1415, 1417)

North American Agreement on Environmental Cooperation

1983 La Paz Agreement on US/Mexico Border Region

National Environmental Policy Act (NEPA) section 102(f)

Pollution Prosecution Act of 1990 (42 U.S.C. section 4321 note)

Environmental Information Authorities

Clean Air Act (CAA) (42 U.S.C. 7601-7671q)

Clean Water Act (CWA) (33 U.S.C. 1251 - 1387)

Clinger-Cohen Act

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. 9601-9675)

Computer Security Act

Congressional Review Act

Congressional Review Act

CPRKA of 1986

Emergency Planning and Community Right-to-Know Act (EPCRA) section 313 (42 U.S.C. 110001-11050)

Emergency Planning and Community Right-to-Know Act (EPCRA) section 313 (42   U.S.C.   110001-11050

Enterprise for the Americas Initiative Act (7 U.S.C. 5404)

Environmental Research, Development, and Demonstration Act (ERDDA) of 1981

Executive Order 12866

Executive Order 12915 - Federal Implementation of the North American Agreement on   Environmental Cooperation

Executive Order 12916 - Implementation of the Border Environment Cooperation Commission   and the North American Development Bank

Executive Order 13148, "Greening the Government through Leadership in Environmental Management"

Federal Advisory Committee Act (FACA) (5 U.S.C. App.)

Federal Food, Drug and Cosmetic Act (FFDCA)

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) (7 U.S. C. 136-136y)

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) (7 U.S. C. 136-136y)

Federal Managers Financial Integrity Act (FMFIA)

Food Quality Protection Act (FQPA)

Freedom of Information Act (FOIA) (5 U.S.C. 552)

Government Paperwork Elimination Act (GPEA)

Government Performance and Results Act (GPRA)

National Environmental Education Act

North American Agreement on Environmental Cooperation

Paperwork Reduction Act Amendment of 1995 (44 U.S.C. 3501-3520)

Plain Language Executive Order

Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)

Privacy Act

Regulatory Flexibility Act
Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6901-6992k)
Safe Drinking Water Act section 1445 (SDWA) (42 U.S.C. 300f-300j-26)
Small Business Regulatory Enforcement Fairness Act
Toxic Substance Control Act section 14 (TSCA) (15 U.S.C. 2601-2692)
Unfunded Mandates Reform Act

OBJECTIVE: Improve Environmental Performance through Pollution Prevention and Innovation

By 2008, improve environmental protection and enhance natural resource conservation on the part of government, business, and the public through the adoption of pollution prevention and sustainable practices that include the design of products and manufacturing processes that generate less pollution, the reduction of regulatory barriers, and the adoption of results-based, innovative, and multimedia approaches.

Resource Summary
(Dollars in Thousands)

	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	FY 2005 Req. v. FY 2004 Pres Bud
Improve Environmental Performance through Pollution Prevention and Innovation	**$123,311.5**	**$137,968.5**	**$169,802.0**	**$31,833.5**
Environmental Program & Management	$97,351.3	$104,608.4	$113,104.3	$8,495.9
Building and Facilities	$1,557.8	$1,635.3	$1,769.6	$134.3
State and Tribal Assistance Grants	$23,874.4	$31,000.0	$54000.0	$23,000.0
Inspector General	$528.0	$724.8	$928.1	$203.3
Total Workyears	544.2	556.1	562.6	6.5

Program Project
(Dollars in Thousands)

	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	FY 2005 Req. v. FY 2004 Pres Bud
Categorical Grant: State and Tribal Performance Fund	$0.0	$0.0	$23,000.0	$23,000.0
Small Business Ombudsman	$3,048.6	$3,764.9	$3,838.7	$73.8
Categorical Grant: Environmental Information	$18,514.0	$25,000.0	$25,000.0	$0.0
Categorical Grant: Pollution Prevention	$5,360.4	$6,000.0	$6,000.0	$0.0
NEPA Implementation	$11,204.2	$12,315.4	$12,654.2	$338.8
Pollution Prevention Program	$15,450.3	$17,098.7	$22,496.2	$5,397.5
Regulatory/Economic-Management and Analysis	$21,261.8	$18,468.6	$18,551.8	$83.2
Environmental Education	$5,281.0	$0.0	$0.0	$0.0
Congressionally Mandated Projects	$1,950.5	$0.0	$0.0	$0.0
RCRA: Waste Minimization & Recycling	$3,325.9	$4,134.2	$4,193.8	$59.6
Regulatory Innovation	$7,357.9	$19,390.5	$19,349.5	($41.0)
Administrative Projects	$30,556.9	$31,796.2	$34,717.8	$2,921.6
TOTAL	**$123,311.5**	**$137,968.5**	**$169,802.0**	**$31,833.5**

ANNUAL PERFORMANCE GOALS AND MEASURES

GOAL: COMPLIANCE   AND   ENVIRONMENTAL STEWARDSHIP

OBJECTIVE: IMPROVE ENVIRONMENTAL PERFORMANCE THROUGH POLLUTION PREVENTION AND INNOVATION

Reduction of Industrial / Commercial Chemicals

In 2005   Prevent, reduce and recycle hazardous industrial/commercial chemicals and improve environmental stewardship practices.

In 2004   Prevent, reduce and recycle hazardous industrial/commercial chemicals and municipal solid wastes.

In 2003   FY 2003 data will be available in 2005 to verify the quantity of toxic release inventory (TRI) pollutants released, disposed of, treated or combusted for energy recovery in 2003, (normalized for changes in industrial production) will be reduced by 200 million pounds, or two percent, from 2002.

Performance Measures:	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	
Reduction of TRI non-recycled waste (normalized)	Data lag	200 Million		lbs
Alternative feed stocks, processes, or safer products identified through Green Chemistry Challenge Award		210		Prod/proc (Cum)
Number of participants in Hospitals for a Healthy Environment		2000		Participants
Quantity of hazardous chemicals/solvents eliminated through the Green Chemistry Challenge Awards Program		150 million		lbs
For eco-friendly detergents, track the number of laundry detergent formulations developed.		36		formulations
Percent reduction in Toxics Release Inventory (TRI) reported toxic chemical releases at Federal Facilities.			32%	Releases (Cum)
Percent reduction in both Toxics Release Inventory (TRI) chemical releases to the environment from the business sector per unit of production ("Clean Index")			20%	Releases (Cum)
Percent reduction in TRI chemicals in production-related wastes generated by the business sector per unit of production ("Green Index").			10%	Waste (Cum)
Reduction in overall pounds of pollution.			34 Billion	Pounds (Cum)
Millions of dollars saved through reductions in pollution.			134 Million	Dollars (Cum)
Annual cumulative quantity of water conserved			1.5 billion	Gallons (Cum)
Billions of BTUs of energy conserved.			143 Billion	BTU (Cum)

Baseline: The baseline for the TRI non-recycled wastes measure is the amount of non-recycled wastes in 2001 reported FY2003. The baseline for eco-friendly detergents is 0 formulations in 1997. The baseline for the alternative feed stocks / processes measure is zero in 2000.   The baseline for the quantity of hazardous chemicals / solvents measures is zero pounds in the year 2000.   The baseline for the hospitals measure is zero in FY2001. The baseline reference point for reductions of pollution and conservation of BTUs and water will be zero for 2003. The baseline for money saved will be 2003. The baseline for reduction in CO_2 will be zero for 1996. The baseline for the Clean and Green Index would be 2001 levels. The baseline for chemical releases is 2001 level. The baseline for chemical production related wastes is 2001 level. Note: Several output measures were changed to internal-only reporting status in 2005.   Annual Performance measures under development for EPA's Environmentally Preferable Purchasing program for the FY2006 Annual Performance Plan.

Innovation Activities

In 2005 Performance Track members collectively will achieve an annual reduction of 600 million gallons in water use; 2.5 million MMBTUs in energy use; 15,000 tons of solid waste; 6,000 tons of air releases; and 10,000 tons in water discharges, compared with 2001 results.

Performance Measures:	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	
Specific annual reductions in five media/resource areas: water use, energy use, solid waste, air releases, and water discharges.			5	media reductions

Baseline: The baseline year is 2001. The FY 2005 specific reductions planned are that Performance Track members collectively will achieve annual reductions, compared with 2001, of 600M gallons of water used; 2.5M MMBTUs of energy used; 15,000 tons of solid waste; 6,000 tons of air releases; and 10,000 tons of water discharges.

VERIFICATION AND VALIDATION OF PERFORMANCE MEASURES

FY 2005 Performance Measure:

Percent reduction in both Toxics Release Inventory (TRI) chemical releases to the environment from the business sector per unit of production ("Clean Index").

Percent reduction in TRI chemicals in production-related wastes generated by the business sector per unit of production ("Green Index").

Percent reduction in Toxics Release Inventory (TRI) reported toxic chemical releases at Federal Facilities.

Performance Database: TRIM: Toxics Release Inventory Modernization, formerly TRIS (Toxics Release Inventory System) provides facility/chemical-specific data quantifying the amount of TRI-listed chemicals entering wastes associated with production process in each year. The total amount of each chemical in production-related wastes can be broken out by the methods employed in managing such wastes, including recycling, energy recovery, treatment, and disposal/release. Amounts of these wastes that are not recycled are tracked for this performance measure.

Data Source: Regulated facilities report facility-specific, chemical-specific release, waste and recycling data to EPA. For example, in calendar year 1999, 22,639 facilities filed 84,068 TRI reports.

Methods, Assumptions, and Suitability: TRI data are collected as required by sections 313 of EPCRA and 6607 of Pollution Prevention Act (PPA) (40 CFR ' 372; www.epa.gov/tri/). Only certain facilities in specific Standard Industrial Classification (SIC) codes are required to report annually the quantities of over 650 listed toxic chemicals and chemical categories released to each environmental medium and otherwise managed as waste (40 CFR ' 372; www.epa.gov/tri/). Regulation requires covered facilities to use monitoring, mass balance, emission factors and/or engineering calculations approaches to estimate releases and recycling volumes. For purposes of the Clean and Green Index performance measures, data controls are employed to facilitate cross-year comparisons: a subset of chemicals and sectors are assessed that are consistently reported in all years; data are normalized to control for changes in production using published U.S. Bureau of Economic Analysis (BEA) gross product indices (chain-type quantity index for the manufacturing sector). [Please note, the federal facility measure data are not normalized to control for changes in production].

QA/QC Procedures: Most facilities use EPA-certified automated Toxics Release Inventory (TRI) FORM R reporting tools, which contain automated error checking mechanisms. Upon receipt of the facilities' reports, EPA conducts automated edits, error checks, data scrubs, corrections and normalization during data entry and subsequent processing to verify that the information provided by the facilities is correctly entered in TRIM. The Agency does not control the quality of the data submitted by the regulated community. EPA does, however, work with the regulated community to improve the quality of their estimates.

Data Quality Review: The quality of the data contained in the TRI chemical reports is dependent upon the quality of the data that the reporting facility uses to estimate its releases and other waste management quantities. Use of TRI Form R by submitters and EPA's performance data reviews combine to help assure data quality. The GAO Report, Environmental Protection: EPA Should Strengthen Its Efforts to Measure and Encourage Pollution Prevention (GAO - 01 - 283), recommends that EPA strengthen the rule on reporting of source reduction activities. Although EPA agrees that source reduction data are valuable, the Agency has not finalized regulations to improve reporting of source reduction activities by TRI-regulated facilities.

Data Limitations: Use of the data should be based on the user's understanding that the Agency does not have direct assurance of the accuracy of the facilities' measurement and reporting processes. TRI release data are reported by facilities on a good faith, best-estimate basis. EPA does not have the resources to conduct on-site validation of each facility's reporting data, though on-site investigations do occur each year at a subset of reporting facilities.

Error Estimate: From the various data quality efforts, EPA has learned of several reporting issues such as incorrect assignment of threshold activities and incorrect assignment of release and other waste management quantities (EPA-745-F-93-001; EPA-745-R-98-012; www.epa.gov/tri/tridata/data_quality_reports/index.htm; www.epa.gov/tri/report/index.htm.)

For example, certain facilities incorrectly assigned a 'processing' (25,000 lb) threshold instead of an 'otherwise use' (10,000 lb) threshold for certain non-persistent, bioaccumulative and toxic (PBT) chemicals, so they did not have to report if their releases were below 25,000 lbs. Also, for example, some facilities incorrectly reported fugitive releases instead of stack releases of certain toxic chemicals.

New/Improved Data or Systems: EPA plans to develop regulations for improving reporting of source reduction activities by TRI reporting facilities.

References: www.epa.gov/tri/ and additional citations provided above. (EPA-745-F-93-001;EPA-745-R-98-012;http://www.epa.gov/tri/report/index.htm; www.epa.gov/tri/tridata/data_quality_reports/index.htm; www.epa.gov/tri/report/index.htm Bureau of Economic Analysis (BEA) indices are available at http://www.bea.gov/bea/regional/gsp/

FY 2005 Performance Measure:

- **Reduction in overall pounds of pollution**
- **Billions of BTUs of energy conserved**
- **Billions of gallons of water saved**
- **Millions of dollars saved through reductions in pollution**
- **Reduction in carbon dioxide (CO2) emissions from a baseline year of 1996. (Green Chemistry only)**

The Agency's Pollution Prevention programs include Green Chemistry, Design for the Environment, Green Engineering, and other Pollution Prevention (P2) Programs. Each of these programs operate under the principles of the Pollution Prevention Act and work with others to reduce waste at the source, before it is generated. These programs are designed to facilitate the incorporation of pollution prevention concepts and principles into the daily operations of government agencies, businesses, manufacturers, nonprofit organizations, and individuals.

Performance Database:
Green Chemistry (GC): EPA is developing an electronic database ("metrics" database) which will allow organized storage and retrieval of green chemistry data submitted to EPA on alternative feedstocks, processes, and safer chemicals. The database is being designed to store and retrieve, in a systematic fashion, information on the environmental benefits and, where available, economic benefits that these alternative green chemistry technologies offer. The database is also being designed to track the quantity of hazardous chemicals and solvents eliminated through implementation of these alternative technologies.

Design for the Environment (DfE): DfE does not have a performance database. Instead, DfE is planning to develop an evaluation spreadsheet for its main project approaches (i.e., Life Cycle Assessment, Formulator, Best Practices, Cleaner Technology Substitutes Assessment, and Supply Chain). Spreadsheet content will vary by approach, and generally will include measures comparing baseline technologies or products to "cleaner" ones, as well as information on partner adoption and/or market share of cleaner alternatives; for example, the DfE formulator approach tracks chemical improvements (such as pounds of chemicals of concern no longer used by partners, and conversely pounds of safer ingredients) and resource savings. This information will allow benefit calculations.

Green Engineering (GE): Similar to the Green Chemistry Program, EPA will be developing an electronic database to keep track of environmental benefits of GE projects including, gallons of water, British Thermal Units (BTUs) and dollars saved and pounds of carbon dioxide (CO_2) emissions eliminated.

Pollution Prevention (P2) Programs: EPA is working with state and local P2 programs to develop a national database that will provide data on environmental outcomes (the core P2 metrics included in the above performance measure). Many EPA Regional offices', state and local P2 programs are currently collecting data on P2 program activities, outputs, and outcomes. EPA will be working with these programs to reach consensus on standardized metrics, including definitions, and to establish an ongoing system to gather data on these metrics. The system will include new reporting requirements in EPA P2 grants and the cooperation of key stakeholder groups, such as the National Pollution Prevention Roundtable (which produced a January 2003 report providing baseline data on the above metrics for the period 1990-2000). Data collected from the program will be placed in a new national database, facilitating convenient data storage and retrieval.

Data Source:
Green Chemistry (GC): Industry and academia submit nominations annually to OPPT in response to the Presidential Green Chemistry Challenge Awards. Environmental and economic benefit information is included in the nomination packages. The metrics database pulls this benefit information from the nominations.

Design for the Environment (DfE): The source of DfE's evaluation information varies by the approach and the partner industry. For example, in DfE's formulation improvement partnerships, partners provide proprietary information on both their original formulation and their environmentally improved one. Partners sign a memorandum of understanding with EPA/DfE which includes information on how the company uses cleaner chemistry to formulate a product, the environmental and health benefits of the product, and customer and sales information. For other partnerships, data sources typically include technical studies (e.g., cleaner technology substitutes assessments, life-cycle assessments) and market/sales/adoption information from associations.

Green Engineering (GE): Data will come from profiles of recognized projects by technical journals or organizations, such as the American Institute of Chemical Engineers, or directly reported by project leaders on industry projects or joint academia-industry projects.

Pollution Prevention (P2) Programs: State and local P2 programs will submit data as described above.

Methods, Assumptions, and Suitability:
Green Chemistry (GC): This is an output measure tracked directly through OPPT record-keeping systems. No models or assumptions or statistical methods are employed.

Design for the Environment (DfE): Methods and assumptions vary by approach and partner industry. Each DfE partnership identifies and focuses on a unique set of chemicals and industrial processes. For most DfE approaches, the general method is to 1) develop a model for a "typical" or "average" facility, 2) assess the differences between traditional and alternative technologies on metrics such as toxics use, resource consumption, cost, and performance, 3) track market share of alternative technologies over time, and 4) multiply the increase in use of alternative, cleaner technologies by the environmental, cost, and performance differences identified in Step 2. Through this quantitative process, the Agency is able to calculate the benefits generated by the cleaner technology: e.g. how much toxics use reduction is occurring, how much less resources are consumed? Similarly, for DfE's formulation improvement approach, the method is to analyze environmental (e.g., toxics use, resource consumption) and cost differences between the old and improved formulations. This proprietary information is provided by our partners and sales information. For each approach, we will develop a spreadsheet that includes the methods and assumptions.

Green Engineering (GE): The information will be tracked directly through EPA record keeping systems. No models or statistical extrapolations are expected to be used.

Pollution Prevention (P2) Programs: The data will come from state and local P2 programs as described above. No models or assumptions or statistical methods are employed.

QA/QC Procedures: All Pollution Prevention and Toxics programs operate under the Information Quality Guidelines as found at http://www.epa.gov/oei/qualityguidelines/index.html and under the OPPT Quality Management Plan (QMP). OPPT Quality Management Plan is for internal use only.

Green Chemistry: Data undergo a technical screening review by OPPT before being uploaded to the database to determine if they adequately support the environmental benefits described in the application. Subsequent to OPPT screening, data are reviewed by an external independent panel of technical experts from academia, industry, government, and NGOs. Their comments on potential benefits are incorporated into the database. The panel is convened by the Green Chemistry Institute of the American Chemical Society, primarily for judging nominations submitted to the Presidential Green Chemistry Challenge Awards Program and selecting winning technologies

Design for the Environment (DfE): Data undergo a technical screening review by DfE before being uploaded to the spreadsheet. DfE determines whether data submitted adequately support the environmental benefits described.

Green Engineering (GE): Data collected will be reviewed to ensure it meets the EPA Quality Guidelines in terms of transparency, reasonableness and accuracy.

Pollution Prevention (P2) Programs: Data will undergo technical screening review by EPA and other program participants (e.g., National Pollution Prevention Roundtable) before being placed in the database. Additional QA/QC steps to be developed, as appropriate.

Data Quality Review: All Office of Pollution Prevention and Toxics (OPPT) programs operate under the Information Quality Guidelines as found at http://www.epa.gov/oei/qualityguidelines/index.html and under the OPPT Quality Management Plan (QMP).

Green Chemistry (GC): Review of industry and academic data as documented in U.S. EPA, Office of Pollution Prevention and Toxics, Green Chemistry Program Files available at http://www.epa.gov/opptintr/greenchemistry/

Design for the Environment (DfE): Not applicable.

Green Engineering (GE): Data collected will be reviewed to meet data quality requirements.

Pollution Prevention (P2) Programs: The new metrics and data system were based, in part, on recommendations in the February 2001 GAO report, "EPA Should Strengthen Its Efforts to Measure and Encourage Pollution Prevention" (GAO-01-283). They also incorporate work by such organizations as the Northeast Waste Management

Officials Association, Pacific Northwest Pollution Prevention Resource Center, and National Pollution Prevention Roundtable.

Data Limitations:
Green Chemistry (GC): Occasionally data are limited for a given technology due to confidential business information (the Presidential Green Chemistry Challenge Awards Program does not process CBI). It also is occasionally unclear what the percentage market penetration of implemented alternative green chemistry technology (potential benefits vs. realized benefits) is. In these cases, the database is so noted.
Design for the Environment (DfE): Occasionally data are limited for a given technology due to confidential business information.

Green Engineering (GE): There may be instances in which environment benefits are not clearly quantified. In those instances, the data will be excluded.

Pollution Prevention (P2) Programs: Limitations arise from the reliance on individual state and local P2 programs to gather data. These programs vary in attention to data collection from sources within their jurisdictions, data verification and other QA/QC procedures. Also, despite plans described above to move toward consistent metrics and definitions, some differences exist

Error Estimate:
Green Engineering (GE): There may be instances in which environment benefits are not clearly quantified. In those instances, the data will be excluded.

Not applicable for other programs contributing data to this measure.

New/Improved Data or Systems:
Green Chemistry (GC), Design for the Environment (DfE), Green Engineering (GE): The American Chemistry Council (ACC) has initiated an industry self-monitoring program called Responsible Care. Beginning in 2003, member companies will collect and report on a variety of information. Measures tentatively include Toxic Release Inventory (TRI) releases; tons of CO_2 equivalent per pound of production; total BTUs consumed per pound of production; systems for assessing or, reassessing potential environmental, health, and safety risks; percentage of products re-evaluated; percentage of commitments for chemical evaluation programs; documentation of process for characterizing and managing product risks; and documentation of communication of risk characterization results. Many of these measures are similar to the EPA program targets identified under Goal 5, Objective 2. These reports may be an invaluable source of industry baseline information. It is important that the EPA programs identified under Goal 5 evaluate the utility of the reports generated under the ACC's Responsible Care Program in support of the EPA's programs as well as the goals of Responsible Care. (CAPRM II, *Chemical and Pesticide Results Measures*, March 2003 pp. 313)

Pollution Prevention (P2) Programs and Hospitals for a Healthy Environment (H2E): See discussion in first item.

References:
Chemical and Pesticide Results Measures II: http://www.pepps.fsu.edu./CAPRM/index.html
Green Chemistry (GC): http://www.epa.gov/opptintr/greenchemistry/
Design for the Environment (DfE): http://www.epa.gov/opptintr/dfe/
Green Engineering (GE): http://www.epa.gov/opptintr/greenengineering/
Pollution Prevention (P2) Programs: http://www.epa.gov/oppt/p2home/index.htm

FY 2005 Performance Measure: Specific annual reductions in five media/resource areas: water use, energy use, solid waste, air releases, and water discharges.

Performance Databases: Both the Performance Track On-Line (a Domino database) and the Performance Track Members Database (a Microsoft Access database) store information provided to EPA from members' applications and annual performance reports. Both databases contain the same information; in fact, data from PTrack On-Line is transferred electronically to the PTrack Members Database, which is more useful for analysis. Performance Track members select a set of environmental indicators on which to report performance over a three-year period of participation. The externally reported indicators (listed above) may or may not be included in any particular

facility's set of indicators. Performance Track aggregates and reports only that information that a facility voluntarily reports to the Agency. A facility may make progress towards one of the above indicators, but if it is not among its set of "commitments", then Performance Track's data will not reflect the changes occurring at the facility. Similarly, if a facility's performance declines in any of the above areas and the indicator is not included among its set of commitments, that decline will not be reflected in the above results.

Members report on results in a calendar year. Fiscal year 2005 corresponds most closely with members' calendar year of 2005. That data will be reported to the Performance Track program by April 1, 2006. The data will then be reviewed, aggregated, and available for external reporting in August 2006. (Calendar year 2004 data will become available in August of 2005.)

Data Source: All data are self-reported and self-certified by member facilities.

Methods, Assumptions, and Suitability: Data collected from members' applications and annual performance reports are compiled and aggregated across those members that choose to report on the given indicator. The data reflect the performance results at the facility; any improvements or declines in performance are due to activities and conditions at the specific facility. The data should not be interpreted to represent the direct results of participating in the Performance Track program. Additionally, while Performance Track asks that facilities report results of an indicator for the facility as a whole, in some cases facilities report results for specific sections of a facility. This is not always clear in the reports submitted to the program. For example, Member A commits to reducing its VOC emissions from 1000 tons to 500 tons over a 3-year period. In Year 1, it reports a reduction of VOCs from 1000 tons to 800 tons. Performance Track aggregates this reduction of 200 tons with results from other facilities. But unbeknownst to Performance Track, the facility made a commitment to reduce its VOCs from Production Line A and is only reporting on its results from that production line. The facility is not intentionally hiding information from EPA, but it mistakenly thought that its commitment could focus on environmental management activities at Production Line A rather than across the entire facility. Unfortunately, due to increased production and a couple of mishaps by a sloppy technician, VOC emissions at Production Line B increased by 500 tons in Year 1. Thus, the facility's VOC emissions actually INCREASED by 300 tons in Year 1. Performance Track's statement to the public that the facility reduced its emissions by 200 tons is therefore misleading.

The data can be used to make year-to-year comparisons, but reviewers and analysts should bear in mind that Performance Track membership is constantly in flux. Although members should retain the same set of indicators for their three-year participation period, as new members join the program and others leave, the baseline constantly changes.

Due to unavoidable issues regarding the timing of the application period, a small subset of reported data will represent two years of performance at certain facilities, i.e., the baseline will be two years prior rather than one year.

QA/QC Procedures: Data submitted with applications and annual performance reports to the program are reviewed for completeness and adherence to program formatting requirements. In cases where it appears possible that data is miscalculated or misreported, EPA or contractor staff follows up with the facility. If the accuracy of data remains under question or if a facility has provided incomplete or non-standard data, the database is coded to ensure that the data is excluded from aggregated and externally reported results.
Additionally, Performance Track staff visit up to 20% of Performance Track member facilities each year. During those visits, facilities are asked about their data collection systems and about the sources of the data reported to the program.

Performance Track contractors conduct a quality review of data entered manually into the database. Performance Track staff conduct periodic checks of the entered data.

As described, Performance Track is quality controlled to the extent possible, but is not audited in a formal way. However, a prerequisite of Performance Track membership is an environmental management system (EMS) at the facility, a key element of which is a system of measurement and monitoring. Most Performance Track facilities have had independent third-party audits of their EMSs, which create a basis for confidence in the facilities' data.

A Quality Management Plan is under development.

Data Quality Reviews: N/A.

Data Limitations: Potential sources of error include miscalculations, faulty data collection, misreporting, inconsistent reporting, and nonstandard reporting on the part of the facility. Where facilities submit data outside of the Performance Track On-Line system, Performance Track staff or contractors must enter data manually into the database. Manually entered data is sometimes typed incorrectly.

It is clear from submitted reports that some facilities have a tendency to estimate or round data. Errors are also made in converting units and in calculations. In general, however, EPA is confident that the externally reported results are a fair representation of members' performance.

Error Estimate: Not calculated.

New/Improved Performance Data or Systems: As of spring 2004, all Performance Track applications and annual performance reports will be submitted electronically (i.e., through the Performance Track On-Line system), thus avoiding the new for manual data entry. Additionally, the program is implementing a new requirement that all members gain third-party assessments of their EMS.

References: Members' applications and annual performance reports can be found on the Performance Track website at http://www.epa.gov/performancetrack/particip/alphabet.htm.
Performance Track On-Line and the *Performance Track Members Database* are not generally accessible. Performance Track staff can grant access to and review of the databases by request.

STATUTORY AUTHORITIES

Antarctic Science, Tourism, and Conservation Act (ASTCA)
Clean Air Act (CAA) section 309 (42 U.S.C. 7609)
Clean Water Act (33 U.S.C. 1251-1387)
Economy Act of 1932
Emergency Planning and Community Right-to-Know Act (EPCRA) (42 U.S.C. 11001-11050)
Endangered Species Act (ESA)
Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) sections 3, 4, 5, 6, 11, 18, 24, and 25 (7 U.S.C. 136a, 136a-1, 136c, 136d, 136i, 136p, 136v, and 136w)
National Environmental Policy Act
Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)
Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6901-6992k)
Safe Drinking Water Act
Small Business Regulatory Enforcement Fairness Act
Solid Waste Disposal Act as amended by the Hazardous Waste Amendments of 1984
Toxic Substances Control Act

OBJECTIVE: Build Tribal Capacity

Through 2008, assist all federally recognized tribes in assessing the condition of their environment, help in building their capacity to implement environmental programs where needed to improve tribal health and environments, and implement programs in Indian country where needed to address environmental issues.

Resource Summary
(Dollars in Thousands)

	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	FY 2005 Req. v. FY 2004 Pres Bud
Build Tribal Capacity	**$70,556.6**	**$78,759.3**	**$78,931.1**	**$171.8**
Environmental Program & Management	$13,882.1	$15,687.4	$15,849.2	$161.8
State and Tribal Assistance Grants	$56,212.5	$62,500.0	$62,500.0	$0.0
Building and Facilities	$87.7	$73.6	$79.3	$5.7
Inspector General	$374.3	$498.3	$502.6	$4.3
Total Workyears	99.8	99.5	98.4	-1.1

Program Project
(Dollars in Thousands)

	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	FY 2005 Req. v. FY 2004 Pres Bud
Categorical Grant: Tribal General Assistance Program	$56,212.5	$62,500.0	$62,500.0	$0.0
Tribal - Capacity Building	$9,555.8	$10,494.1	$10,641.7	$147.6
Administrative Projects	$4,788.3	$5,765.2	$5,789.4	$24.1
TOTAL	**$70,556.6**	**$78,759.3**	**$78,931.1**	**$171.7**

ANNUAL PERFORMANCE GOALS AND MEASURES

Tribal Environmental Baseline/Environmental Priori

In 2005   Assist federally recognized tribes in assessing the condition of their environment, help in building their capacity to implement environmental programs where needed to improve tribal health and environments, and implement programs in Indian country where needed to address environmental issues.

In 2004   Percent of Tribes will have an environmental presence (e.g., one or more persons to assist in building Tribal capacity to develop and implement environmental programs.

Performance Measures:	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	
Percent of Tribes with delegated and non-delegated programs (cumulative).		25%		Tribes
Percent of Tribes with EPA-reviewed monitoring and assessment occurring (cumulative).		20%		Tribes
Percent of Tribes with EPA-approved multimedia workplans (cumulative).		18%		Tribes
Increase tribes' ability to develop environmental program capacity of federally recognized tribes that have access to an environmental presence.			90	% Tribes
Develop or integrate EPA and interagency data systems to facilitate the use of EPA Tribal Enterprise Architecture information in setting environmental priorities and informing policy decisions.			5	Systems
Eliminate data gaps for environmental conditions for major water, land, and air programs as determined through the availability of information in the EPA Tribal Enterprise Architecture.			5	% Data Gap
Increase implementation of environmental programs in Indian country by program delegations, approvals, or primacies issued to tribes and direct implementation activities by EPA.			159	Programs
Increase the percent of tribes with environmental monitoring and assessment activities under EPA-approved quality assurance procedures.			5	% Tribes
Increase the percent of tribes w/ multimedia programs reflecting traditional use of natural resources.			5	% Tribes

Baseline: There are 572 tribal entities that are eligible for GAP program funding. These entities are the ones for which environmental assessments of their lands will be conducted.

VERIFICATION AND VALIDATION OF PERFORMANCE MEASURES

FY 2005 Performance Measure:

Increase tribes' ability to develop environmental program capacity by ensuring that 90 percent of federally recognized tribes have access to an environmental presence.

Develop or integrate 15 (cumulative) EPA and interagency software applications to facilitate the use of EPA Tribal Enterprise Architecture information in setting environmental priorities and informing policy decisions.

Eliminate data gaps for environmental conditions for major water, land, and air programs as determined through the availability of information in the EPA Tribal Enterprise Architecture.

Increase implementation of environmental programs in Indian Country as determined by program delegations, or primacies issued to tribes and direct implementation activities by EPA.

Increase the percent of tribes with environmental monitoring and assessment activities under EPA-approved quality assurance procedures.

Increase the percent of tribes with multimedia programs reflecting traditional use of natural resources as determined by use of Performance Partnership Grants, EPA/Tribal Environmental Agreements, and other innovative EPA agreements that reflect holistic program integration.

Performance Database: EPA's American Indian Environmental Office (AIEO) has been in the forefront of working with multiple agencies on a federal interagency Tribal Enterprise Architecture under the auspices of OMB Circular A-16 on federal data coordination. The Tribal Enterprise Architecture includes access to a wide variety of data from several agencies and numerous sources within the agencies. It also includes several AIEO-developed applications to analyze environmental performance in Indian Country.

Environmental presence on tribal land is the creation of tribal government infrastructure (FTE and support) to develop program capacity, assess environmental conditions, establish environmental priorities, implement and manage programs that result in environmental improvements. The GAP Grant Tracking System, which is a component of the Tribal Enterprise Architecture, can measure environmental presence, based on tribally reported information. Environmental presence is measured by staffing levels reported; also information is collected on general capacity building, media program, and cross-media activities.

The Tribal Information Management System (TIMS), which is also part of the Tribal Enterprise Architecture, is a web-based application (http:/oasint.rtpnc.epa.gov) used to access baseline environmental information on federally recognized Indian Tribes. Public access to this information via the web cannot be provided until EPA completes its consultation with the tribes. TIMS contains information about the environmental condition of tribal lands, the nature and status of regulated facilities there, as well as the nature and extent of tribal environmental management program activities. TIMS is not a static system. It is a real-time system that extracts information from EPA and external data systems as they are maintained and updated by various federal, non-federal, and tribal partners. TIMS is also a vehicle for tribes, federal agencies and non-federal agencies, to develop partnerships, improve communication, and to establish tribal environmental priorities in a coordinated, multimedia, and interagency way.

TIMS generates tribal profiles, which are standardized overviews of environmental conditions and include tribally supplied background (non-environmental) information. The overviews are multi-media and allow further access to specific, detailed, publicly available information. These profiles, in conjunction with other Tribal Enterprise Architecture information: (1) allow EPA to accurately assess the establishment of an environmental presence in Indian Country, and to report results annually as progress toward performance goals; (2) allow EPA to measure trends and changes in environmental conditions and program results over time; and, (3) provide information for tribes and agencies to establish environmental priorities in a coordinated fashion.

Data Sources: Current TIMS data sources are existing federal databases, both from EPA and other agencies, supplemented by data sources collected from the EPA regions as appropriate. All data sources are identified and referenced in the TIMS application. In FY 2004 we expect to formalize interagency data standards and protocols, working with the Federal Geographic Data Committee (FGDC) formed as a result of OMB Circular A-16, to ensure information is collected and reported consistently among the federal agencies. In 2005, AIEO will be working as the co-lead of the Federal Geographic Data Committee (with DOI's Bureau of Indian Affairs) on the FGDC tribal data workgroup.

Methods, Assumptions and Suitability: The methodology for assessments of environmental conditions in Indian Country will be standard statistical methods of analysis of variance. Chi Square and Fisher linear model techniques will be used to evaluate the statistical significance of comparisons of tribal conditions, with regard to specific environmental parameters, compared to the nation as a whole. The data used to develop these statistical inferences are in general non-aggregated point measurements that have been geographically indexed. Sample sizes are generally large enough (often in the hundreds of thousands when evaluating parameters such as regulated facilities) to provide the necessary degrees of freedom to make statistical inferences in spite of the large variance in sizes of reservations in Indian Country. The data are suitable for year-to-year performance comparisons, and also for trend analysis. Forecasting technologies have not yet been tested on the data.

QA/QC Procedures: All the data used in the baseline project have quality assurance and metadata documentation prepared by the originating agency.   These will all be described in a Quality Management document: "Manual to TIMS: Tribal Information Management System."   AIEO will develop data and metadata standards through its work on the Federal Geographic Data Committee.

Data Quality Reviews: Quality of the external databases will be described but not ranked. Data correction and improvement is an ongoing part of the baseline assessment project. Tribes will have the opportunity to review their Tribal Profiles. Mechanisms for adjusting data will be supplied. Errors in the tribal profile are subject to errors in the underlying data. A special site http://db-server.tetratech-ffx.com/baseline/datacenter which will be used to: 1) allow direct editing and correction of text of the profiles, 2) submit geographic corrections to maps and boundary files, or submit files of different kinds of political units for analysis, and 3) submit corrections to quantitative data points, and 4) display the bibliography used to compile the TIMS information system.

Data Limitations: The largest part of the data used by the Tribal Enterprise Architecture has not been coded to particular tribes by the recording agency. AIEO uses new geographic data mining technologies to extract records based on the geographical coordinates of the data points. For example, if a regulated facility has latitude and longitude coordinates that place it in the boundaries of the Wind River Reservation, then it is assigned to the Arapaho and Shoshone Tribes of the Wind River Reservation. This technique is extremely powerful, because it "tribally enables" large numbers of information systems which were previously incapable of identifying tribes. This will be applied to all the EPA databases. There are limitations, however. When database records are not geographically identified with latitude and longitude, the technique does not work and the record is lost to the system. Likewise, the accuracy of the method depends on the accuracy of the reservation boundary files. EPA continues to request up-to-date and accurate coverage of reservation boundaries and land status designations from other agencies.

Error Estimate: Analysis of variation of the various coverage of reservation boundaries that are available to EPA indicates deviations of up to 5%. The other source of error comes from records that are not sufficiently described geographically, to be assigned to specific tribes. For some agencies, such as USGS, the geographic record is complete, so there is no error from these sources. It is estimated that 20% of the regulated facilities in EPA regulatory databases are not geographically described, and thus will not be recognized by the AIEO methodology.

New/Improved Data or Systems: The technologies used by the Tribal Enterprise Architecture are all new and state-of-the-art. Everything is delivered on the Internet, with security, and no need for any special software or data disk on the desktop.   The geographic interface is an ESRI product called ARC/IMS, which is a web-based application, with a fully functional GIS system that is fully scalable. In FY 2003, the entire system will be rendered in 3D. The Tribal Enterprise Architecture uses XML protocols to attach to and display information seamlessly and in real-time from cooperating agency data systems without ever having to download the data to an intermediate server.

References:

Manual to TIMS: Tribal Information Management System (draft).

http://www.epa.gov/enviro/html/bia/tribal_em.html
https://oasint.rtpnc.epa.gov/TIMS
http://db-server.tetratech-ffx.comn/baseline/datacenter
https://oasint.rtpnc.epa.gov/TATS
http://gap-demo.tetratech-ffx.com

STATUTORY AUTHORITIES

Act of 1992 as amended (42 U.S.C. 4368b)
Indian Environmental General Assistance Program (GAP)

OBJECTIVE: Enhance Science and Research

Through 2008, strengthen the scientific evidence and research supporting environmental policies and decisions on compliance, pollution prevention, and environmental stewardship.

Resource Summary
(Dollars in Thousands)

	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	FY 2005 Req. v. FY 2004 Pres Bud
Enhance Science and Research	**$72,209.6**	**$77,181.8**	**$70,128.7**	**($7,053.1)**
Environmental Program & Management	$12,336.5	$11,039.9	$10,936.2	($103.7)
Hazardous Substance Superfund	$5,160.1	$8,070.5	$6,879.5	($1,191.0)
Science & Technology	$53,066.4	$56,273.7	$50,468.8	($5,804.9)
Buildings and Facilities	$1,337.1	$1,422.4	$1,506.3	$83.9
Inspector General	$309.3	$375.3	$337.9	($37.4)
Total Workyears	293.5	304.4	299.0	-5.3

Program Project
(Dollars in Thousands)

	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	FY 2005 Req. v. FY 2004 Pres Bud
Research: Pollution Prevention	$31,504.1	$38,998.6	$34,060.5	($4,938.1)
Forensics Support	$14,845.9	$18,258.4	$16,910.8	($1,347.6)
Research: Environmental Technology Verification (ETV)	$2,619.0	$4,011.8	$2,996.8	($1,015.0)
Congressionally Mandated Projects	$9,040.0	$0.0	$0.0	$0.0
Administrative Projects	$14,200.6	$15,913.0	$16,160.6	$247.6
TOTAL	**$72,209.6**	**$77,181.8**	**$70,128.7**	**($7,053.1)**

ANNUAL PERFORMANCE GOALS AND MEASURES

Research

Pollution Prevention Research

Long-term Outcome Measure	Measure under development.
Annual Measure	Measure under development.
Efficiency Measure	Measure under development.

New Technologies

In 2005   Complete thirty verifications and four testing protocols for a program cumulative total of 280 verifications and 88 testing protocols for new environmental technologies so that, by 2009, appropriate and credible performance information about new, commercial-ready environmental technology is available that influences users to purchase effective environmental technology in the US and abroad.

In 2004   Verify 35 air, water, greenhouse gas, and monitoring technologies so that States, technology purchasers, and the public will have highly credible data and performance analyses on which to make technology selection decisions.

In 2003   Developed 10 testing protocols and completed 40 technology verifications for a cumulative Environmental Technology Verification (ETV) program total of 230 to aid industry, states, and consumers in choosing effective technologies to protect the public and environment from high risk pollutants.

Performance Measures:	FY 2003 Actuals	FY 2004 Pres. Bud.	FY 2005 Pres. Bud.	
Verify and provide information to States, technology purchasers, and the public on 40 air, water, pollution prevention and monitoring technologies for an ETV programmatic total of 230 verifications.	40			verifications
Complete an additional 10 stakeholder approved and peer-reviewed test protocols in all environmental technology categories under ETV, and provide them to international testing organizations.	10			protocols
Through the ETV program, verify the performance of 35 commercial-ready environmental technologies.		35		verifications
Verifications completed			15	verifications
Testing protocols completed			2	protocols

Baseline: Actual environmental risk reduction is directly related to performance and effectiveness of environmental technologies purchased and used. Private sector technology developers produce almost all the new technologies purchased in the U.S. and around the world. Purchasers and permitters of environmental technologies need an independent, objective, high quality source of performance information in order to make more informed decisions; and vendors with innovative, improved, faster and cheaper environmental technologies need a reliable source of independent evaluation to be able to penetrate the environmental technology market. Through FY 2004, EPA's Environmental Technology Verification (ETV) Program will have verified approximately a programmatic total of 265 technologies, as well as making data on their performance available for public use, and will have developed 86 protocols. In FY 2005, the ETV Program will complete 15 additional verifications and two testing protocols for a cumulative total of 280 verifications and 88 testing protocols since ETV begin in 1995. Beginning in FY 2005, regular evaluations by independent and external panels will provide reviews of EPA research programs' relevance, quality, and successful performance to date, in accordance with OMB's Investment Criteria for Research and Development. These evaluations will include an examination of a program's design to determine the appropriateness of a program's short-, intermediate-, and long-term goals and its strategy for attaining these. Reviewers will also qualitatively determine whether EPA has been successful in meeting its annual and long-term commitments for research. Recommendations and results from these reviews will improve the design and management of EPA research programs and help to measure their progress under the Government Performance and Results Act (GPRA).

VERIFICATION AND VALIDATION OF PERFORMANCE MEASURES

FY 2005 Performance Measure: Verifications completed

Performance Database: Program output; no internal tracking system

Data Source: N/A

Methods, Assumptions and Suitability: N/A

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: N/A

FY 2005 Performance Measure: Testing protocols completed

Performance Database: Program output; no internal tracking system

Data Source: N/A

Methods, Assumptions and Suitability: N/A

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: N/A

STATUTORY AUTHORITIES

Clean Air Act
Clean Air Act Amendments of 1990
Clean Water Act
Comprehensive Environmental Response, Compensation, and Liability Act sections 106, 107, 109, and 122 (42 U.S.C. 9606, 9607, 9609, 9622)
Emergency Planning and Community Right-to-Know Act sections 325 and 326 (42 U.S.C. 11045, 11046)
Federal Insecticide, Fungicide, and Rodenticide Act
Federal Technology Transfer Act
Ocean Dumping Act sections 101, 104B, 105, and 107 (33 U.S.C. 1411, 1414B, 1415, 1417)
Pollution Prevention Act
Pollution Prosecution Act of 1990 (42 U.S.C. section 4321 note)
Residential Lead-Based Paint Hazard Reduction Act of 1992, section 1018 under TSCA section 11 (42 U.S.C. 4852d, 2610)
Resource Conservation and Recovery Act (RCRA) of 1976, as amended; 42 U.S.C. 6901-6992K)
Safe Drinking Water Act
Small Business Innovation and Development Act
Superfund Amendments Reauthorization Act
Toxic Substances Control Act